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GUEST EDITORIAL

FOR MANY YEARS COLLEGES CONSIDERED LABOR unrest and strikes to be an industrial disease from which they were immune. Today's events point up the fallacy of this assumption. In many situations on the American college campus organized labor has had ample justification for requesting a redress of injury or grievance. Educational institutions have been slow to provide adequate wage and salary scales, contending that their nonprofit educational status relieved them of meeting standards of compensation enjoyed by employes in comparable jobs outside. It hardly seems necessary to explain why that policy is not meeting today's conditions.

Colleges must get their houses in order if they wish to forestall or to minimize employe discontent. Machinery for the prompt and equitable handling of grievances must be set up. Wage rates and hours must be carefully restudied. Plans for old age retirement and sickness disability benefits must be worked out. These are minimum considerations.

One of the most effective means of maintaining employe loyalty, morale and sense of participation is honestly and realistically to allow the employe some chance to express his beliefs, opinions and ideas on policy. Labor unions came into being because this need for individual expression was not being met by our form of business and industrial organization and because the voice of the individual could be heard only through the amplified power of the group.

We hear much these days of the encroachment of labor on "management rights," those prerogatives which management has held as its own but which labor feels it should share in shaping since the results affect the welfare of its members. At the other extreme, we hear of occasional programs for "multiple management" in which farsighted employers have not only accepted but solicited employe participation in developing plans and policies.

The multiple management idea pins down for permanent use the ideas developed in the employe

management plan. A number of business concerns have been experimenting in this approach and are finding that it can work. The pattern usually shapes up something along the line of that recently evolved by McCormick and Company, nationally known food processors. This firm has recently borne open testimony to the fact that its multiple management plan has eliminated labor unrest and increased profits in the process. Factory workers have a factory board of directors; the sales force, a sales board; the junior executives, a junior board, and management and stockholders, a senior board of directors. Many constructive and profitable ideas have been passed up to the senior board of directors and as many impractical proposals turned down by the other boards before getting to the senior board. The plan has developed enthusiastic employe support and loyalty which has made for a type of labor peace conspicuous in these days.

Is it too revolutionary to suggest that a similar approach could work on the campus? It might be a little early to expect that this exact form of participation would make for the best results, but it is not too early for serious consideration of some way of developing an increase in employe loyalty which can come only from attempts to do things together.

A few educational institutions have already experienced real labor trouble. More may have it to face. And when that happens the prestige of the institution suffers, service may be temporarily suspended and everybody gets riled. The alternative is to study objectively your personnel policies and, if necessary, revise them to avoid possible explosions. If you don't assume leadership, someone will.

Labor must meet its responsibility, too. It must not walk a one way street with administration assuming all responsibility and all liability. At the price of personal gain or power, the public interest must not be sacrificed. All segments of the employed college family must understand the functions of the enterprise and work jointly toward realization of its objectives.—DONALD E. DICKASON.

College AND UNIVERSITY Business

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Among the Authors



L. F. ROBBINS

he has the time to indulge in that pursuit.

LESLIE F. ROBBINS, who discusses purchasing problems in this issue, is purchasing agent of the University of Colorado and has made purchasing problems his hobby and vocation since 1921. Prolific author, he has written extensively for business magazines and has a book to his credit. He claims to be a dub golfer, an experimenter with home movies and admits an enthusiasm for travel when



PORTER BUTTS

From his many years as director of the University of Wisconsin Memorial Union, PORTER BUTTS has learned there are no easy answers to college union problems. He serves as editor of publications and planning consultant of the Association of College Unions. He lists his hobbies as writing, skiing, billiards and singing. . . . JOHN SHEPARD PARKE, who writes on the importance of working

cooperatively with your architect in the planning of new construction, is a graduate architect from Cornell University and at present executive vice president of Presbyterian Hospital in New York City. He is an ardent sportsman, with golf, fishing and hunting competing for his attention.



R. E. ELLSWORTH

The new trend in library construction is described by RALPH E. ELLSWORTH, director of libraries and professor of librarianship at the University of Iowa. Author of eight professional articles on library building problems, he still finds time to do extensive reading "like all good librarians." He enjoys tying trout flies, fishing and gardening in his leisure time. . . . As the recently elected president of the American College Public Relations Association, HAROLD K. SCHELLINGER writes authoritatively on college and university public relations. He is director of the bureau of public relations at Ohio State University and was formerly a newspaper editor at Jackson, Ohio. His first newspaper venture was a typewritten publication in the eighth grade of school; profit for year: 15 cents, spent on banana split.



A. F. GALLISTEL

A. F. GALLISTEL writes on arboreta as superintendent of buildings and grounds at the University of Wisconsin. Prominent civic leader, he has been president or officer of a score of professional and civic groups. When he finds a spare moment he dabbles with oil paintings. . . . J. HARVEY CAIN discusses the problems of financing higher education out of a rich background of experience. He was formerly accountant and statistician for many Wall Street firms and was later successively secretary to the president, auditor and business manager of the Catholic University of America. Later, he became director of the financial advisory service of the American Council on Education, and is now accounting officer of the board of higher education of the City of New York.

A SOUND PURCHASING SET-UP

Procurement is an art the development of which depends on experience, good buying procedures and authority of agency. Qualified personnel is a basic requirement

ADEQUATE PURCHASING IS MOSTLY work rather than, as some seem to think, a facility at outsmarting the other fellow.

I should prefer to advocate measures which make for effective purchasing and let the matter of whether the purchasing is done in a separate department depend on the volume of purchasing work and the availability of competent personnel.

The volume of work determines the number of people needed in the purchasing activities. A broad estimate of the personnel required for educational purchasing might be: One experienced full time buyer for each \$250,000 to \$500,000 of the annual purchasing budget (reducing somewhat for budgets of more than \$1,000,000) and one clerk or stenographer for each two buyers.

Individual situations will vary from this rule of thumb. (Industrial purchasing usually requires a smaller ratio of personnel to dollar volume since industry purchases larger quantities of fewer items.) If your school is spending as much as \$250,000 a year for supplies and equipment and if the buying is being done by an officer who has other important responsibilities, the chances are that he is considerably overworked or that he is having to slight some part of his duties.

Some authorities are inclined to place greatest emphasis upon the centralization of the purchasing authority as the primary consideration. Centralization is necessary and there is little doubt that adequate authority is important, but purchasing proficiency is equally necessary and important. The heads of the teaching and research departments are specialists in their respective fields. The purchasing agent must be a specialist in his field: procurement. If you find one who is competent, it will pay you to pay him what he is worth and hang on to him.

Good purchasing agents are not born that way, it is conceded, and yet if a man is not born with a reasonably adequate endowment of sound judgment, industry, foresight, integrity and a capacity for consistent growth, he will need to acquire those qualities somewhere along the way.

Some of the other necessary ingredients are experience, adequate purchasing procedures and the authority of agency. I should not harp overmuch on intramural authority. That is a cloak to be worn unassumingly and generally implied rather than brashly mounted in the business office like a machine gun on a guardhouse tower.

When there has not been centralized purchasing previously, the first implement with which the purchasing agent will need to provide himself is a comprehensive analysis of the institution's purchasing needs. This analysis will serve as a road map of the way ahead. Probably the best source of raw material for such a survey is the file of the paid invoices for the most nearly normal recent year.

The information should be tabulated to reveal, among other things: (1) the volume of purchases by general classes

of requirements and the prices paid; (2) the sources of supply that were used for each class, and (3) the departments and divisions on the campus which requisition the same or similar items.

The list of sources will be useful as a check list against which to compare a listing of all available sources for those classes in your trade territory. Any such logical sources not used in the past represent possible purchasing profits for the future.

Another valuable facility of which the purchasing department should early avail itself is an adequate body of purchasing policy. When working under well planned and clearly stated policy there can be blessed consistency, consistency time-wise (the factors which governed action last year will also govern it this year and next) and consistency throughout the institution, in all departments, enhancing unification. Without policy or with too casual policies there is a tendency toward disparity and sloppy mental attitudes.

The direct profits or savings that help to justify centralized purchasing are found in two principal areas: (1)

What About Ultimate Value?

- Hiring a man, giving him a desk and conferring upon him the title of purchasing agent will not guarantee effective purchasing.
- Much effective purchasing is done by people who do not wear the purchasing agent title.
- If you do not have an adequate purchasing department, that does not necessarily mean you are not paying the cost of one; profits from adequate purchasing would probably pay the freight several times over.

savings resulting from better prices and, somewhat conversely, (2) savings realized by purchasing a quality better suited to the particular need, even at a higher price.

Legitimate price savings are not the result of "chiseling." They may be expected to accrue from consistent, intelligent use of standard purchasing technics: (a) pooling requirements from various departments in order to achieve higher discount brackets; (b) standardizing on a smaller number of varieties and sizes of a particular item; (c) obtaining more effective competition from legitimate vendors; (d) finding acceptable substitutes and becoming promptly acquainted with new industrial materials developments, and (e) seasonal buying.

UTILIZATION OF TESTS

A consistent program of testing products and commodities by means of use tests as well as by controlled tests in the laboratory will yield dividends in the improvement of quality and in the procurement of grades better adapted to the particular need.

Indirect profits from the right kind of centralized purchasing are to be expected from better anticipation of needs, thus reducing irritating delays and costly shutdowns; the avoidance of excessive inventories by stocking supplies for all departments in one central stock room; greater interchangeability through interdepartmental standardization; better inspection of goods as they are delivered; prompt placement of claims for adjustment, and better supplier relations.

If there was no other argument for centralized purchasing than the centralization of the records, that alone would afford sufficient justification. There is considerable value and satisfaction in being able to go to one well organized pool of information and to find out just what was bought before, where, when and for how much.

It is extremely important that the purchasing department have the loyal support of the top administration. In normal times there may be several or many bidders competing intensively for each important order. All have their own technics of sales pressure. Only one of them can be successful on any one occasion.

The very human tendency for the unsuccessful ones to consider that they have been unfairly dealt with is always present. It is inevitable that some of the losers will register their complaints

with the higher-ups. While the purchasing department should stand ready to defend its judgment at any time, there is no explanation that will mollify a bad loser. If the president or the comptroller makes a practice of lending a sympathetic ear to the poor losers and of forming judgments adverse to his own purchasing agent without affording him a fair hearing, sound purchasing will have been hopelessly undermined.

In a tax supported school, there may be a tendency to saddle upon its purchasing agent an extra burden of a type about which industrial purchasing agents usually do not have to be concerned. This is a neat-compulsion for the inordinate use of competitive bidding open to all taxpaying vendors.

The theory is that if the purchasing department will draw up adequate specifications, the lowest bid within the specifications must be accepted and will be the best buy. That theory may sometimes work with such staple



items as nails and cement, which are available from several acceptable sources in standard quality, but much of the buying typical of a large university is not in that class.

To be brief, if the specifications are broad enough to admit competition, the rigid use of that procedure often prevents the institution from obtaining the best buy! A quality that might be much more suitable than that stipulated in the specifications has to be passed up because the price bid on that better quality is ever so slightly higher than the bid on another offering that barely meets the minimum requirements.

The rules under which the purchasing department is required to operate should be broad enough to encompass the basic idea of ultimate value. Value may legitimately depend upon the interrelation of two variables: price and quality, instead of just a price variable on a fixed quality. The buyer should be enabled to obtain the best buy for the current need with a minimum of restrictions which are not concerned

with the school's long range interests. The purchasing agent's considered judgment should stick, and then he should be held accountable for adequate final results.

A brief discussion such as this could not adequately cover the determination of the most effective purchasing procedure. There are many sources for specific help in this field. Suffice it to say that the system should be suited to the particular need; it should be adequate but contain no more red tape than is necessary to produce the required results.

INTERDEPARTMENT RELATIONSHIP

Relations between the purchasing department and the other departments in the institution can be maintained on a plane of cooperation and mutual understanding or they can be on a level of antagonism, mutual opposition and a thwarting of one another's wishes.

The purchasing agent can be considered as an able assistant in the process of obtaining for the various departments the most satisfactory materials and doing it within the limits of the budgetary appropriation, or he can be looked upon as one who has usurped the cherished prerogatives of the department heads to pick and choose among sources and salesmen, brands and labels. In a large measure it is a matter of personal attitudes. Some professors want to be helped, others do not. Most of them will listen to reason and some of the rest can be shown.

It is an inadequate conception of the purchasing function to expect the purchasing agent to sit at his desk all day every day and process requisitions. He must have an outward reach in at least two directions: he must be constantly increasing his practical knowledge of the campus uses for the material he is buying and he must be forever improving the effectiveness of his contacts with his sources of supply.

To these ends, he will often be found in the science laboratories, in the college service shops and everywhere about the campus where people are working with materials. He will make frequent excursions to the offices and warehouses of the firms selling what he has to buy and to the plants of the manufacturers. He will miss no opportunity to associate himself with other buyers who have problems similar to his own. He will be constantly striving to make himself a master of materials.

A *Good* UNION BUILDING IS TAILOR-MADE

PORTER BUTTS

Director of the Wisconsin Union, University of Wisconsin
Editor, Association of College Unions

HARDLY A FORTNIGHT GOES BY THAT a union director does not receive an inquiry such as this: "Our school is planning to build a college union building. Can you assist us by sending a copy of the floor plans of your building?"

And the union director knows that the inquiring college at that point is headed for trouble.

The assumption in the inquiry is that if college officials can review the blueprints of several existing unions on campuses of comparable size, as it would review the drawings for a swimming pool or dormitory, it will know what to do or at least will know how to avoid a serious mistake.

UNION IS COMMUNITY CENTER

The trouble is that a union is not like a swimming pool or a dormitory, which has fairly standard unit and functional characteristics needing to be adjusted only in size to fit the requirements. The college social or community center is one of the most highly complex and specialized kinds of buildings.

In the first place, there is nothing elsewhere quite like a union; a club, hotel or civic community center will afford no safe pattern to go by, although the union embodies characteristics of each. A union is much more inclusive and unusual in its facilities; it may house club facilities, restaurants, chapel, hotel, theaters, art galleries, post office, hobby shops, radio studios, stores and a battery of offices all under one roof, a special combination of these functions or all of them.

In the second place, any union, to be valid and of maximum use for a given campus, needs to reflect and strengthen the traditions and life of that campus and to serve the special recreation interests and community living needs of its campus population, a highly individual problem. In other words, a good union is a tailor-made job and, therefore, cannot be arrived

at merely by consulting the plans of other unions.

The situation for the college has been further complicated in the past by the fact that with two or three exceptions the existing unions, which might otherwise be useful guides in at least some respects, have been designed by architects with no previous experience in planning campus social centers. As a result, when other architects and planning committees have conscientiously tried to fill the gaps in their own experience by studying other union plans or visiting nearby union buildings, the errors of the earlier buildings have often been unknowingly repeated; facilities that were good for one campus have been thoughtlessly transplanted to another where they were ill advised, and good solutions in distant unions and new trends in student social needs have been overlooked entirely.

I know of one union, on a strongly coeducational campus, which built a large dining room for men only (hence no washrooms near by for women) simply because it observed that there were large dining rooms for men only in two other union plans being studied, which happened to be unions on campuses for men only. Women's washrooms had to be added in the first year at great expense.

In another case, improbable as it may seem, the architectural program for a union at a small college called for a sizable cafeteria, a typical union facility on most campuses, to be sure, but on this one all students were required to board at dormitories or clubs and the faculty dined at home. These are extreme examples, perhaps, but missteps of this kind, in varying degrees of seriousness, are happening right along.

Almost every union director knows how much the inexperience of architects in the union planning field and the process of borrowing from other union plans without interpretation

have meant in inefficiently arranged or unused spaces, unnecessary operating and maintenance expense, thwarted development of desirable activities and costly remodeling.

One union spent \$40,000 in the first year in rearranging entries and exits, revamping kitchen spaces, changing wiring and plumbing systems and making other changes. It is still paying heavily each year in extra wage costs to carry equipment between floors because there is no storage space on an upper private dining room floor.

PLANNING SAVES MONEY

It is probably correct to say that ineffective architectural planning has cost unions, collectively, many hundreds of thousands of dollars in both construction and operating expense.

What can be done to obtain better results for the more than 50 projected college unions, large and small, now in the planning stage?

First of all, the college would do well to start with a careful study of its own needs and a formulation of a guiding philosophy and program of what it wants the union to do for its campus. A thoroughgoing survey of the local campus situation is almost indispensable.

How many students are housed in organized houses and have a social life and dining rooms of their own? What are the distinguishing local student social and recreational customs? What do students want that they do not already have? What else does the campus or town offer recreationally? What objectives in informal student education is the union expected to accomplish?

How will each campus organization make use of a community center and how often? Will townspeople and conventions use it? How many students live at home or at a distance from the campus? What are future enrollment prospects, the ratio of men to women? The answers to these and



Proposed union building, State College of Washington. Stanley A. Smith, college architect. H. C. Weller, associate.



The union serves the special recreation interests and community living needs of its campus population. Shown above is a traditional campus parade staged in front of the Illini Union on the University of Illinois campus.



Characteristics of club, hotel, community center are embodied in the union. The student lounge above is in the new Student Union, Montana State College. The ballroom is to the right of the foyer seen in the distance.



Objectives of informal education can be accomplished through the use of workshops as demonstrated by this scene showing one of the three popular workshop rooms in the Wisconsin Union at the University of Wisconsin.

to many similar questions the architect will want to know and out of all of the accumulated information will emerge a desirable plan for the union.

There is value, of course, in learning what other unions are like and what facilities and programs are popular and profitable. An old proverb reads: "Whom you don't meet, you do not marry." There is danger in assuming that *all* relevant and necessary information is present on the campus and in the faculty. To gain perspective and not to miss any good bets, it is highly useful to have a planning committee which brings together as much union information as possible through visits to representative unions and through the aid of the publications and consultants of the Association of College Unions,¹ provided such information is intelligently sifted and applied to the local circumstances.

Then comes the stage of active architectural planning. Some years ago, to assist colleges in avoiding the painful errors and unnecessary expense of the past, the association established an architectural planning and consulting service, with architects in charge² who specialize in union design and who have planned a number of such structures. Plans, experience data and suggestions from many operating unions have been filed there.

Colleges planning or remodeling unions may obtain the combined experience of other unions, translated into technical terms, through the consulting office which acts as either architect or consultant to the college architect, following the practice of many church associations, the Y.M.C.A. and other national organizations which have established consulting services to ensure correct planning and economical functioning of their special types of buildings.

SEVENTEEN SUGGESTIONS

It is never possible to prescribe closely and wisely without a study of the variant local conditions, but a few typical principles offered by association consultants may at least be suggestive of the nature of the union planning problem:

1. In selecting the site and planning the building, start with the as-

sumption of growth. No one has the last word on what the college may want the union to be and do 21 years from now, or even 10. Most unions are not nearly large enough; many are now planning additions that are larger than the entire original structure.

2. Study each facility with a view to its possibilities for multiple use; where multiple purpose is genuinely feasible, provide the basic design and accessory space and equipment that will make it work for the purpose intended, *i.e.* an adequate servery and table and chair storage for the ballroom which is to be used as a banquet hall; an enclosed, fire code approved projection booth for the ballroom to be used for motion pictures; a flooring suitable for dancing in the dining room to be used for small parties.

3. Take into account that peak loads are characteristic of college dining and union social occasions. Arrange and relate facilities, *i.e.* check-rooms, lobby, meeting rooms, dining rooms, circulation and line-up space, so that a given facility can be readily expanded for peak loads and contracted for normal use.

4. Locate some facilities on the ground floor but remember that others work best on the second or even third floors. Determine size requirements by what people need. Let the building plan develop accordingly. Do not expect construction economy, operating efficiency or the greatest usefulness if the architect is bound to a scheme of formal symmetry into which facilities have to fit, regardless of what this does to the facility.

5. Consider that a union is no longer merely a place to eat and meet but has to do broadly with the constructive employment of student time outside the classroom, that it represents an experience in a way of living. Hence, consider facilities for cultural and creative pursuits (theater, music, library, art), for hobbies and crafts and for outdoor activity (outing headquarters and program) as well as for social and dining activities of both students and faculty.

6. Consider with special care the advisability of including these facilities: bookstores, faculty clubs, a hotel unit, beauty shops, separate lounges for men and women and offices for university administrators (other than union or alumni) and religious organizations. These are facilities about which there is widely varying opin-

ion. On some campuses they have met with poor success or have a doubtful relation to the central purposes of a union.

7. Provide for plenty of meeting rooms. Colleges always underestimate their needs for this facility; the rooms they do provide are usually too large. (The most frequent demand for meeting rooms is for groups of fewer than 20.)

8. Observe the natural flow of traffic on the campus; choose a location and include in the building the services and facilities that give students reason to use it almost daily, if you would have a social center.

9. Plan kitchens in size and layout with the cooperation and counsel of an experienced food director (preferably the person who is to direct the union food services) and also of food equipment manufacturers or distributors.

10. Plan architectural relationships so that many social facilities become natural feeders to income facilities.

11. Plan student office space flexibly and avoid permanent commitments to prospective office holders.

12. Plan, at least broadly, the nature and number of building staff members and employes before going too far and then make provisions for offices and employe quarters accordingly. If possible, employ the union director *before* the building is constructed so that he can assist in the planning, ensure that operating requirements are met and understand fully how the plant is to work.

13. Provide plenty of storage space. There is never enough and usually it is not in the right place. Hundreds of dollars annually in servicing costs can be saved through proper planning.

14. Remember that students are rarely interested in just a place to sit down. Plan rooms and lounges in which they can do something.

15. Lay out entrances, lounges, library and telephones with an eye to easy supervision by the staff.

16. Consider the physical means to social and financial ends. Many facilities substantially fail of their purpose because they lack air conditioning, acoustical treatment, appropriate lighting or furniture.

17. Do not make it hard to enter the building. No service institution which seriously cares about having people use its facilities would interpose the obstacle of a monumental flight of steps at the entrance.

¹The national office of the Association of College Unions is at Willard Straight Hall, Cornell University, Ithaca, N. Y.

²Michael M. Hare and Livingstone Elder, 147 East Eighteenth Street, New York 3, N. Y.

SO YOU'RE PLANNING TO BUILD

How to select architects, engineers and builder and to draw up contracts

JOHN S. PARKE

Executive Vice President
Presbyterian Hospital in the City of New York

BASICALLY, THE OUTCOME OF A SUCCESSFUL building program for a college or university is the close partnership relation among the owner, the architect and the builder.

For the purpose of this article, I shall call the owner the board of trustees. Commencing with this board, the first important step should be the appointment of a planning committee of the board of trustees, the duties, procedures and authorities of which should be defined by the board of trustees. (Oftentimes, committees are handicapped because their duties have not been clearly defined.)

In general, this committee should have the power of recommendation for all phases of the proposed building program, excluding, of course, minor alterations and routine repairs.

In addition to the planning committee of the board of trustees, a planning committee of the faculty and administration should be appointed. This group's responsibility would be the detailed study of the various projects of the program; it would have only the power of recommendation to the planning committee of the board of trustees. Both of these committees should be required to hold stated meetings and to keep minutes.

- TO WORK WITH THESE TWO COMMITTEES, I recommend that a consulting architect be engaged by the owner on a retainer basis, with provision included for reimbursement for the services of his architectural assistants. He would have two main functions to perform: to act as consultant or adviser on all matters pertaining to the architectural work on the various projects and to prepare a master plan.

By a master plan, I mean one showing the location of existing and future buildings, supported by a plan of existing mechanical and utility services. This plan should be based upon facts, not dreams; should be revised periodically and not filed away.

The best master plan is none too good for coordinated future development of institutions. A great deal of time and money has been wasted on such plans for the reason that sufficient study was not given to the development of the problem at hand.

For prospective donors and for public interest, a perspective of the entire development is required.

- LET US ASSUME THAT A DEFINITE project is under consideration. The first step would be the selection of an architect for the particular project in view. It would not be advisable to have the consulting architect act in this capacity, but he could be of great assistance in selecting and submitting, on the following basis, a list of architects for the consideration of the planning committee: (1) professional ability of the firm, (2) experience in the particular type of project under consideration, (3) the present organization of the firm and (4) volume of work on hand.

After the planning committee of the faculty and administration has received this list, it should be the duty of this committee to visit the offices of the listed architects, review their organizations and obtain firsthand (not by letter) the experience of other clients. The last item is of utmost importance.

I have not taken into consideration the question of a prospective donor requesting a particular architect, for, when one of these conditions arises, the consulting architect should advise.

- AS TO THE ARCHITECTURAL CONTRACT, the majority are on the basis of percentage of cost; however, I much prefer a fixed fee. If the contract is on a percentage of cost basis, one is likely to become apprehensive, knowing that the architect's fee goes up with the cost of the structure. In my opinion, this is unfair, as I feel that the architect is entitled to a fair fixed

fee as compensation for his services in addition to reimbursement for whatever time is given to the project by his assistants.

Is it advisable to have supervision included in the architect's contract? I recommend that any contract with an architect include supervision and I mean *real* supervision, not merely interpretation of plans. There should be no divided responsibility in a building project. The architect is required to accept full responsibility, including preparation of drawings and specifications and supervision and close inspection of the work of the builder for which a reasonable fee is merited.

- SIMULTANEOUSLY WITH THE SELECTION of the architect, consideration should be given to the consulting engineers for heating and ventilating, air conditioning, electric and plumbing work, provided, of course, the architect does not have his own engineering department. The ideal organization requires close relationship between the architect and the engineer. Drawings of the mechanical trades must be prepared and coordinated with the working drawings of the architect to ensure that adequate space is allowed for the mechanical trades.

The cost of mechanical trades in institutional buildings ranges from 20 to 25 per cent of the total cost. Those in the business administration of colleges and universities know well the troubles that come from a poorly designed and installed mechanical plant.

If consulting engineers are retained, again I recommend that the contract be on a fixed fee basis and that the engineers be directly responsible to the architect and not to the owner. In this connection, I should ask the architect to submit the names of at least three consulting engineers who, in his opinion, would be qualified to do the work. The planning committee would review these names, paying particular attention to the various me-

chanical systems which they have installed in various other buildings.

After the architect and consulting engineers have been selected, the planning committee of the board of trustees should submit to them a tentative program. Once this has been received, the architect should commence the preparation of sketches, or the fundamental design. The point that I cannot emphasize too strongly is that the so-called sketch stage, or fundamental design, of any building project is the most important of all and requires the most thought. An intensive study of the preliminary sketches and a review of the memorandum specifications should be made before any consideration is given to working drawings.

The architect should then be requested to submit, in one booklet, his sketches, or fundamental design; a brief description of the project; memorandum specifications; approximate estimate of the total cost, *i.e.* the building cost, architectural fees and equipment. To supplement this, a statement should be prepared by the owner's representatives showing the income and expense of the building. Until these sketches, or fundamental designs, have been approved, the architect should not be authorized to proceed with any working drawings.

- **IT IS COMPARATIVELY INEXPENSIVE** to change sketches, but once the working drawing stage has been reached, changes not only are expensive but also slow up progress. Before the fundamental design is finally approved by the trustees, it should be submitted to the owner's maintenance or engineering department. The personnel, which has had experience in the maintenance of structures, should have the opportunity of expressing itself while the project is in its preliminary form.

After the fundamental design has been approved, the planning committee should authorize the architect to proceed with his working drawings and specifications. These are the drawings which are used for the actual execution of the building project. At this point, the architect should be instructed further to consult with the maintenance department and review construction details, selection of materials and similar problems before they are incorporated into the working drawings. The use of untested materials and untried fundamental construction detail should always be avoided.



The consulting architect has two main functions to perform: to advise on architectural work and to prepare a master plan based on facts not dreams.

The next consideration is the selection of a builder. The architect should be requested to submit a list of builders for the approval of the committees. A statement, covering the following items for each builder, should accompany this list: (1) experience record, (2) present organization of the firm, (3) present financial status, (4) volume of work under contract, (5) business methods.

- **DURING THE REVIEW OF THE** builders by the committees, thought should be given to the type of contract under consideration — the so-called lump sum or a form of cost. For institutional construction, I have always believed in awarding the building contract on a cost basis. There are many variations of the cost type of contract but I prefer a fixed fee with a guaranteed upset cost and with all savings reverting to the owner.

When constructing a building on a fixed fee, guaranteed upset cost type of contract, the architect should, after the owner's approval of the list of bidders, prepare to obtain bids. The preparation of the bid form is of utmost importance. Having had twenty-odd years of experience in the building business, I want to emphasize one point, *i.e.* leave no opportunity for a

disagreement as to which costs are reimbursable and which are included in the builder's fee.

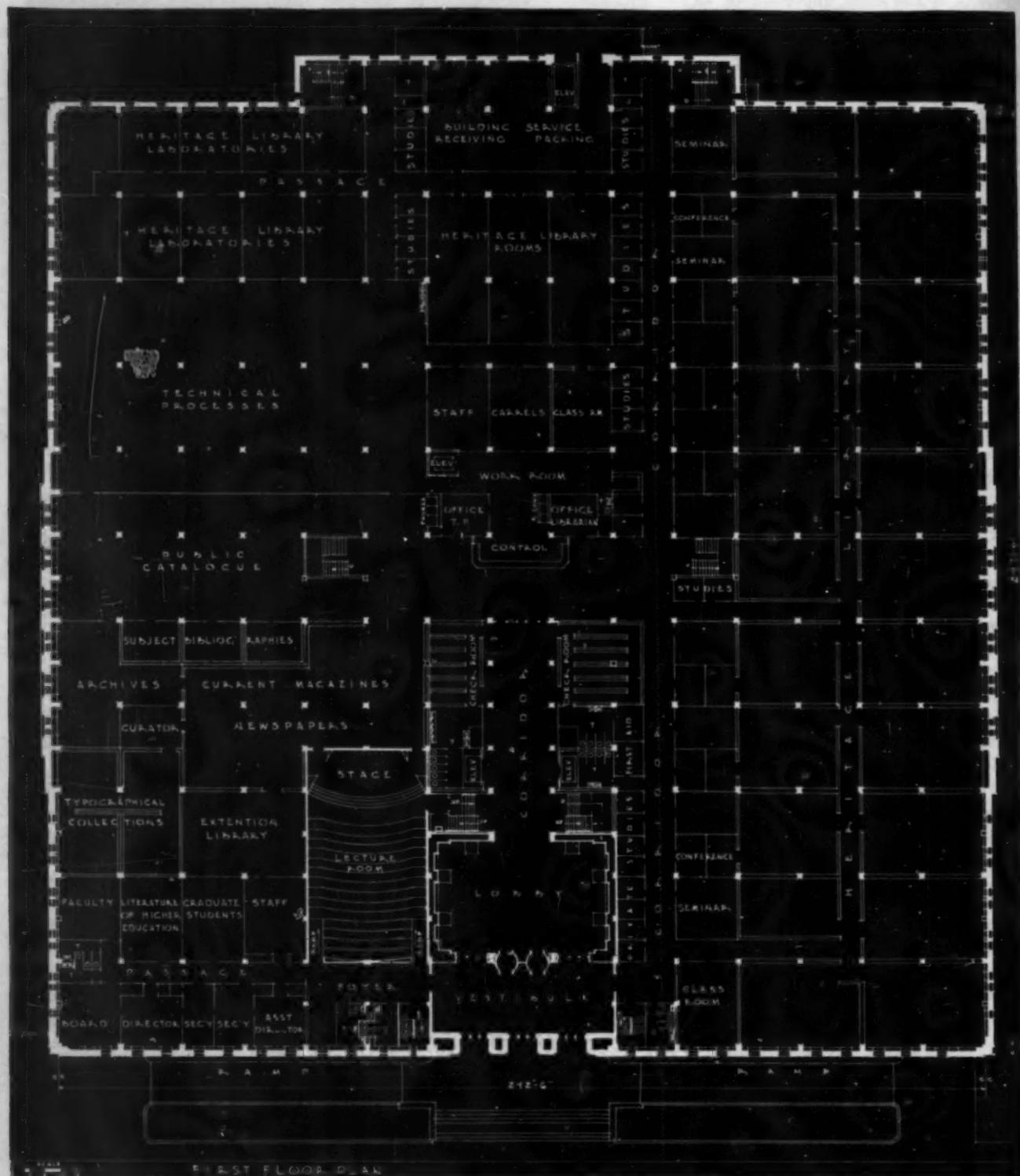
In addition, the bid sheet should require each bidder to submit a list of the trades which he intends to sublet, together with a list of subcontractors covering these trades. This would give the owner the opportunity to review the ability and integrity of the subcontractors before the building contract is consummated.

- **IT IS ESSENTIAL TO CONSIDER THE** selection of the furniture and furnishings as early in the program as possible in order that they be ready for delivery upon completion of the building. I recommend that the architect act in an advisory capacity in selecting this equipment, as there is a definite relationship between the design of the building and the furniture and furnishings. Such equipment could, of course, be bought by the college or university's own purchasing department.

Emphasis should be placed on the fact that if the owner employs a competent architect and an honest builder, the combination is certain to result in the successful completion of the building as well as its efficient and economical operation.

University LIBRARY

The time and study devoted by the University of Iowa faculty library committee on what a library should do has crystallized into a \$4,000,000 project. Farsighted planning provides immunity from early obsolescence in this functional building



RALPH E. ELLSWORTH

Director of Libraries
Professor of Librarianship
University of Iowa

AS SOON AS BUILDING CONDITIONS permit, the University of Iowa proposes to construct the first unit of a new central library building which, when completed, will be a \$4,000,000 project.

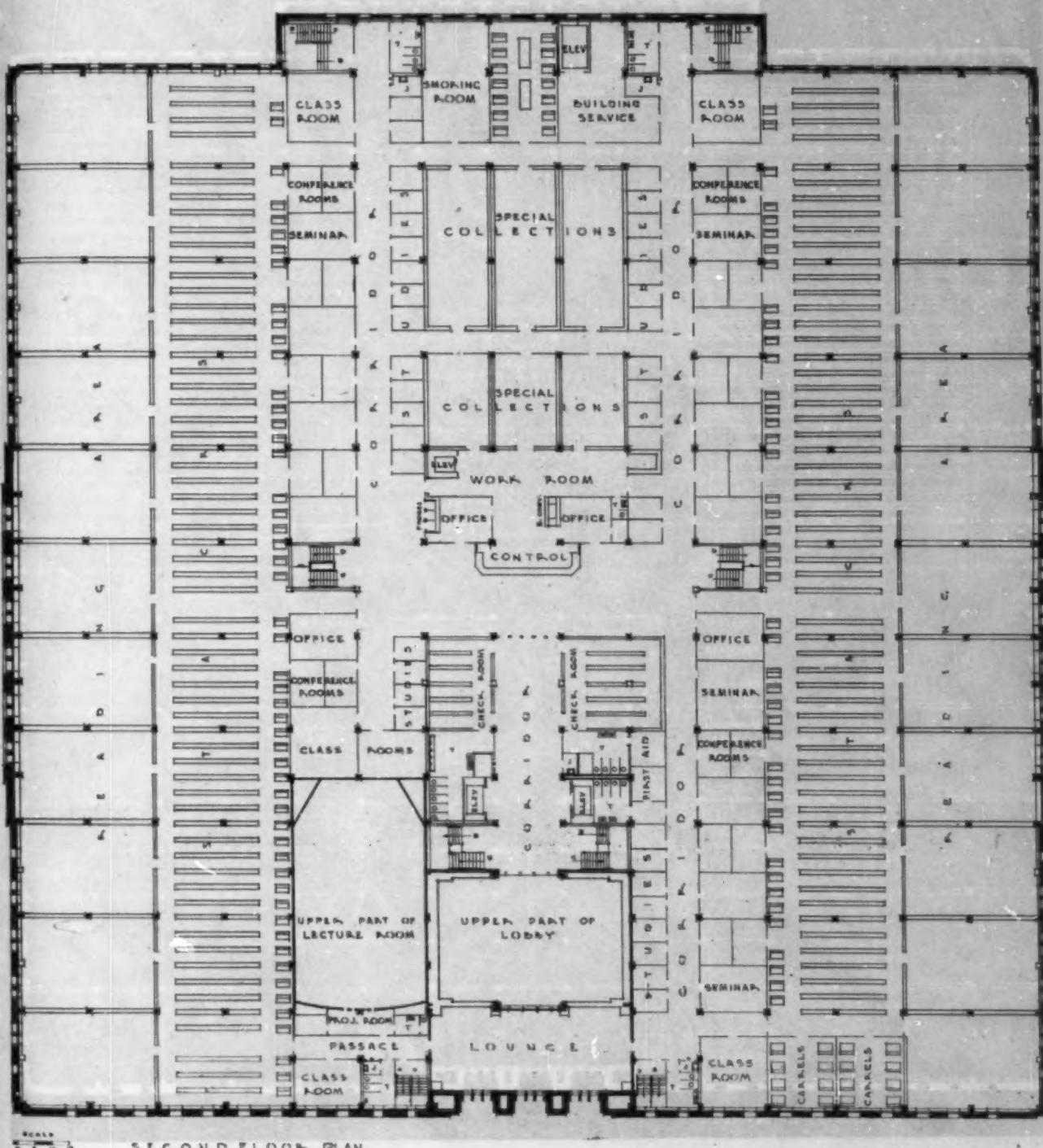
The Iowa library utilizes new principles in planning and construction and a new kind of library program has been developed for the building.

• **AS A STRUCTURE.** The Iowa library represents an attempt to plan a building that will not repeat the conditions that make existing libraries inadequate, i.e. lack of adaptability and of internal flexibility and rapid obsolescence.

The typical college and university library has been planned on the basis of specially designed space areas for typical functions: book storage, reading rooms, staff work space and seminars, and these areas have not been interchangeable. When such buildings were planned, the space needs of the

various functions had to be anticipated for the life of the structure.

Occasionally, a library was planned so that it could be expanded and rearranged without destroying its unity or balance, but in most instances this has not been true. The book collections or the student enrollments grew faster than was anticipated, or the need for seminars or research offices was greater than was expected, or the introduction of a new method of teaching created a space need that could not be met. Thus, most university libraries have become obsolete far



in advance of the life span of the building. The result has been either a major waste of money in remodeling or rebuilding or a major depressing effect on the educational program of the university or college.

Practically all of the floor space in the Iowa building is capable of accommodating all contemplated library activities without structural alterations. The building is to be constructed of modules, or prisms, of space, all the same size. Each prism is cornered by hollow columns which support the

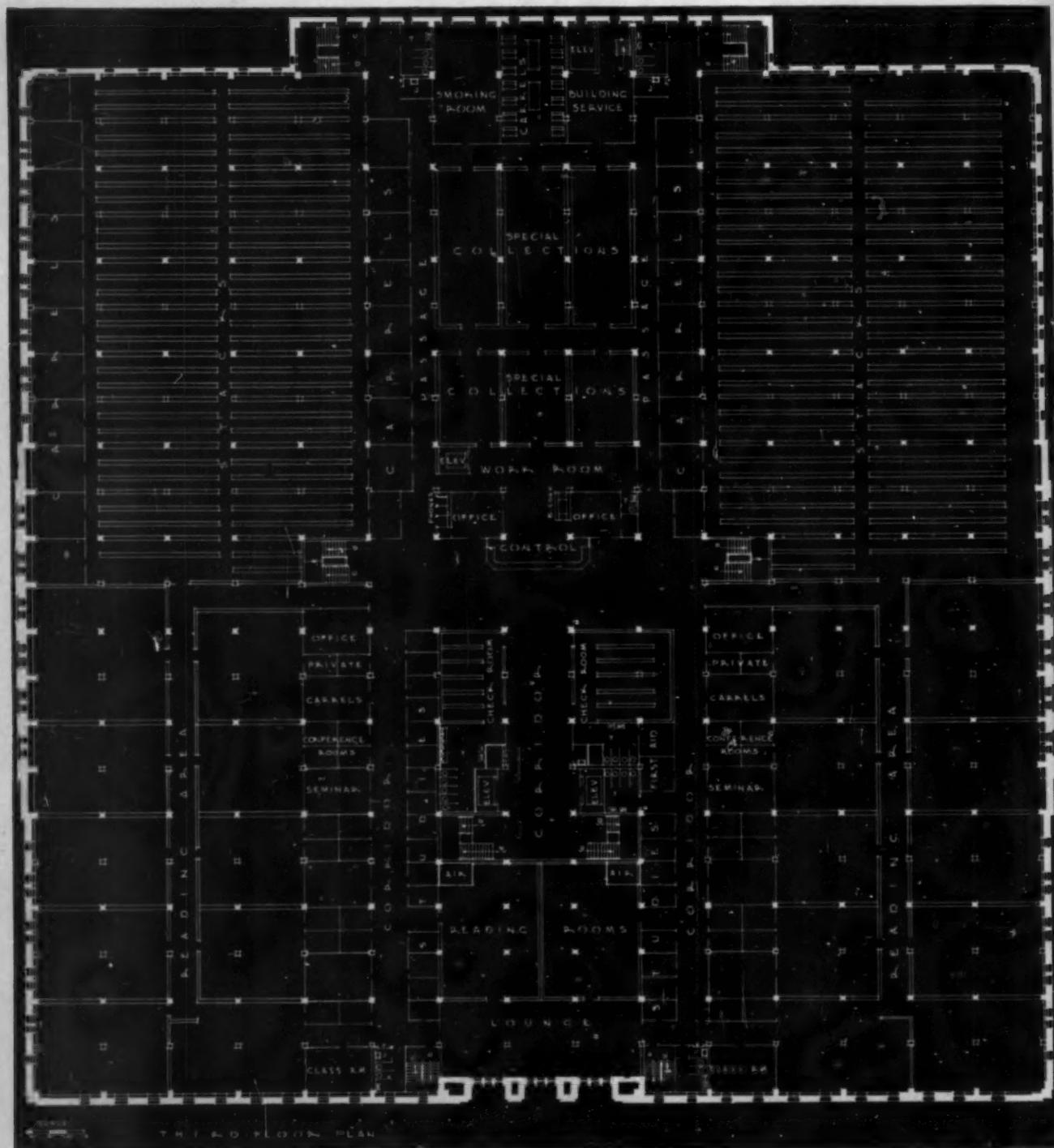
floor structure and serve as air ducts as well as carriers for services such as wiring and piping. Each prism, therefore, provides its own lighting and ventilation independently of all other prisms.

The dimensions of the modules will be approximately 19 feet 6 inches by 27 feet on column centers. Columns will be approximately 18 inches square and the ceiling heights will be 8 feet 4 inches in the clear, except where it is desirable to remove the floor pans within a module or a row of modules

in order to achieve a two story area.

The interior of a modular library is described as consisting of a series of rows of columns supporting the floors. The interior is developed and subdivided by means of movable wall panels set between columns in either direction, or by rows of free standing bookcases arranged either as borders of reading areas or compactly as in a typical library stack room.

Since the columns serve as air ducts and carriers for wiring, a modular library can be planned with the utmost



freedom in terms of interior use and can be rearranged at any time without involving reconstruction. Reading space can be converted into book storage space and vice versa, and special rooms can be established at any given space simply by setting up wall panels.

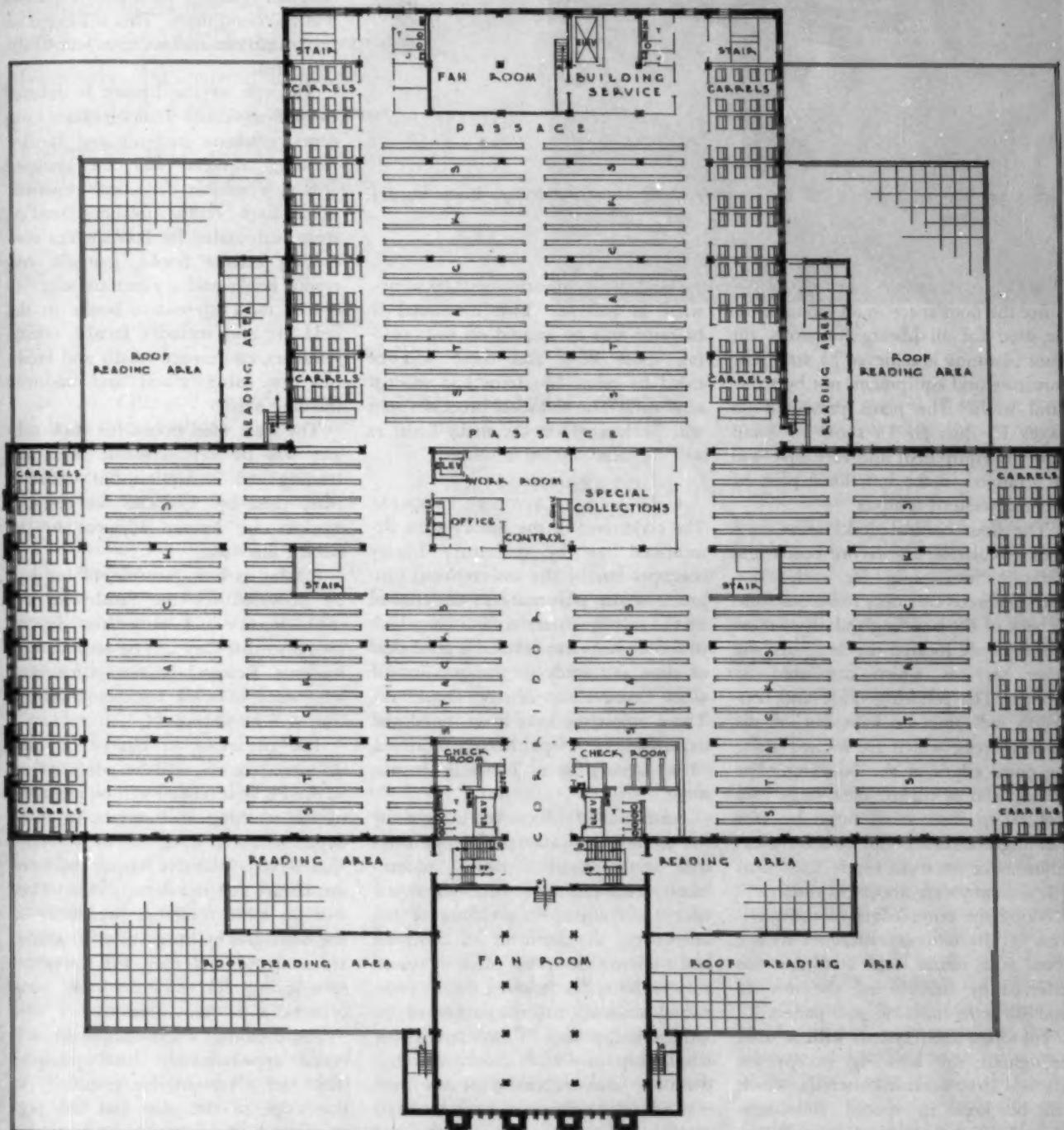
Various construction methods can be used in modular planning, either wet or dry. If reinforced concrete or wet construction is used for the columns and floors, a separate system of providing air ducts must be developed

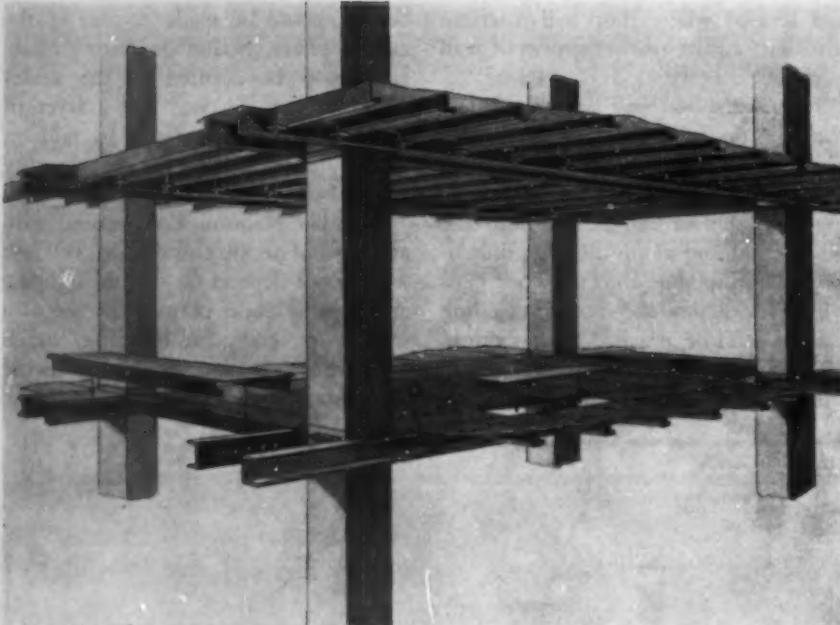
and located where they will interfere least with future rearrangement of wall panels.

Page 14 shows one system of steel framing, or dry construction. Various kinds of dry construction methods can be used. It will be seen in this drawing how the air can be fed into the girders running along the long dimension of the module into the floor pans which run across the module. Ceiling plates would be attached to the bottom of the pans and the light fixtures, which would be almost flush with the

ceiling, could be made as part of the ceiling plates. Sound deadening material could be applied to the under side of the floor pans and a layer of lightweight cement would be laid on top of the pans. The finished flooring would be placed on the cement.

Modular planning can be used with any kind of architectural style. Because it does not depend on natural lighting and ventilation, it permits the use of a square or rectangular building, which gives the most square feet of usable floor area for the money available.





Cross section of module to be employed in construction of Iowa library.

• **AS A LIBRARY ORGANIZATION.** Since the floor space in all modules can be used for all library functions, the floor planning is achieved by arranging furniture and equipment, not by structural walls. The plans presented on pages 10 through 13 show in detail how the equipment and furniture will be arranged in the functional plan on this midwestern campus.

The floor control desks serve as a book circulation and record center and traffic control point for each floor. Two generous corridors run from front to back of the building and off of these corridors are located the seminars and other services which are used by groups. The resulting noise and confusion will thus be kept out of the reading areas, which are located along the outer edges of the building. The reading rooms consist of a large area broken up into small units by free standing bookcases, wall panels for exhibitions or museum cases. Each unit will accommodate about 30 readers.

Along the outer edges of the corridors, faculty offices, conference rooms, visual aid rooms and seminars are achieved by subdividing the row of modules with movable wall panels.

The open shelf system will be used throughout the building except for rare and irreplaceable materials, which will be kept in special collections rooms behind the control desk. When they leave the building, readers will be carefully checked as they pass the floor control desk on some one floor.

The staff organization will be somewhat as follows: Two divisional librarians will be located on each reading room floor and these will be aided by other librarians and student assistants. The technical processes staff will be located on the main floor, as will the administrative offices.

• **AS AN EDUCATIONAL PROGRAM.** The objectives of the library were determined not by customary library concepts but by the instructional program of the university as understood by the faculty library committee which in recent years has devoted a great deal of time and study to the question of what a university library should do. These objectives have been stated and explained in a published brochure, "The Library as a Teaching Instrument."

Fundamental objectives sought by the committee were: study conditions that would ensure a natural student-faculty relationship for the social science and humanities divisions of the university; development of teaching and study methods that place increased responsibility for learning on the individual student; encouragement of an inductive approach to the literature of scholarship in social science and humanities; encouragement of the general education program, and generous conditions for research by faculty and graduate students.

The library program developed to achieve these objectives begins with a

center for general education called the "heritage library." This center consists of two parts: (1) a study center built around a visual presentation of the history of ideas, surrounded by seminars, visual aid rooms, faculty offices and conference rooms; (2) a lecture hall in which will be developed a special program designed to acquaint students with the nature of the critical issues of contemporary importance.

The "heritage library" is a tangible center for the general education curriculum of the arts college and the assigned readings for the core courses will be found there. This is located on the main floor and occupies half of the floor area.

The rest of the library is devoted to the advanced undergraduate students, graduate students and faculty. Reading centers will be grouped around a subject divisional organization. Each center includes reading areas surrounded by bookshelves containing reserve books, journals, reference books and a generous selection of the most up-to-date books in the field. It also includes faculty offices, seminars, conference rooms and facilities for using visual and auditory learning aids.

The least used books for each subject will be kept separate from the reading area collection but conveniently close by. Cubicles for research workers are located adjacent to the stack collections.

Insofar as it is possible, offices will be provided for the faculty in the social science and humanities departments so that they can be accessible to students. Research hideaways for those who need to work without interruption will be provided.

The librarians in charge of each divisional center will be educated up to the Ph.D. level and will be members of the teaching staff of one or more departments in their division. They will serve as liaison officers between the library and the departments. They will do some teaching, preferably in the bibliography instruction for graduate students, and they will carry responsibility for building the book collections in their divisions.

The building, when completed, will house approximately 5000 people. This fact gives tangible testimony to the scope of the plan and the program and the extent to which the library will serve as a study center for both students and faculty on the University of Iowa campus.

College LIBRARY

Functional in design, the building at historic Rockford College is a center of activity. Its inviting atmosphere is a lure to intellectual enrichment, an appropriate setting for the broadening of campus traditions

ROCKFORD COLLEGE AT ROCKFORD, Ill., dared to do divisional planning of its library building before functional design of this character received the official acceptance it is now rapidly gaining.

This century-old college for women did not impulsively toss out the window the conventional reading, reference, periodical room triad. The final plan, sixth in a series, came from deep faculty conviction.

Historically an old school—one of the oldest four year colleges for women in the United States—Rockford is thoroughly modern in instructional concept and method. It abhors textbook-bound teaching; instead, through its library it exposes the students to an accumulation of literature pertinent to the prescribed and elective courses, acquainting them with original sources, conflicting authorities and contemporaneous materials.

In the new library the girls experience the jolts and joys of free reading and, under guidance, develop discrimination and gradually form judgments of their own. Some of them actually feel their way into the select society of scholars and, at medieval carrells secluded among the stacks, pursue an honors course that requires real research to complete successfully.

JEAN MacNEILL SHARPE

Librarian, Rockford College

and

WILLIS HUBBARD

Architect, Rockford, Ill.

Since the Rockford curriculum is broadly divided into (1) language and literature, (2) social studies, (3) science and (4) the fine arts, the new library building has areas to accommodate these four major divisions. Within each division the conventional areas for reading, reference and periodicals are mere alcoves formed by partitions that are nothing more than well stocked reference shelves. These bookshelf partitions provide the flexibility which will enable the college to keep library and curriculum in functional harmony throughout the life of the building.

No barriers between students and books, that is the keynote of the design. An open plan and informal decoration are the devices used.

Book stacks, periodicals, art collections and reserve books are completely open. Through an amazingly successful honor system the students charge out their own books. No limit is placed upon the number they can borrow. Losses are actually less than under



rigid librarian control. A student committee checks overdue reserve books, assessing fines for volumes two hours or more overdue.

The student library slogan, "Fine Books With Fine Money," adds about \$135 worth of fine books to the collection each year. The student committee makes an annual trip to a famous Chicago bookseller's and invests the fine money with adult discrimination.

Adjacent to the four large divisional rooms are small conference rooms where intimate classes and discussion groups gather around a table. It startles no one if a teacart rolls in to add a home library touch to the conversational give and take.

Now and then departmental teas are held before a blazing fireplace. Original manuscripts and rare books are borne from the shelves to be examined and studied by the girls. A by-product of this form of intellectual enrichment is the sudden inspiration on the part of some student to start a lifetime book collection of her own.

For the large divisional reading rooms and the lobby unusually comfortable study tables, chairs and desks have been designed. The study alcoves are given almost a home library aspect because of these pieces.



Medieval carrels, secluded among the stacks, provide quiet retreat for the research necessary to the successful pursuit of an honors course. Desks are adjustable in height; each has a distinguishing color of top.



The fireplace is the decorative center in three of the four divisional rooms, and informal reading areas for lighter moments have been carefully planned about them. Among the furnishings are the leather covered love seats, shown in the picture above, leather covered wing chairs, wool upholstered semi-circular sofas, occasional tables and interesting reading lamps. From time to time, pupils are invited to departmental teas held before a blazing fire.



Shade trees on the century old campus afford a picturesque frame for the exterior, absorbing the "newness" of the modern building to present a harmonious picture. The exterior of the building is of face brick with limestone trim. The framework of the structure is steel and concrete. The generous use of windows provides such abundant natural light that little assistance from artificial lighting is required except on gloomy days.



The handsome staircase is constructed of steel with cement filled treads which are covered with linoleum as are the floors in lobby and reading rooms. The plaster walls are painted, and the trim is of water-stained birch.

CONSTRUCTION DETAILS

FIREPROOF: Masonry, steel and concrete.

EXTERIOR: Face brick facing with limestone trim.

WINDOWS: Wood double hung with steel projected type in stack room.

ROOF: Slate shingles over gypsum roof deck.

STAIRS: Steel with cement filled treads, linoleum covered.

WALLS: Plaster painted.

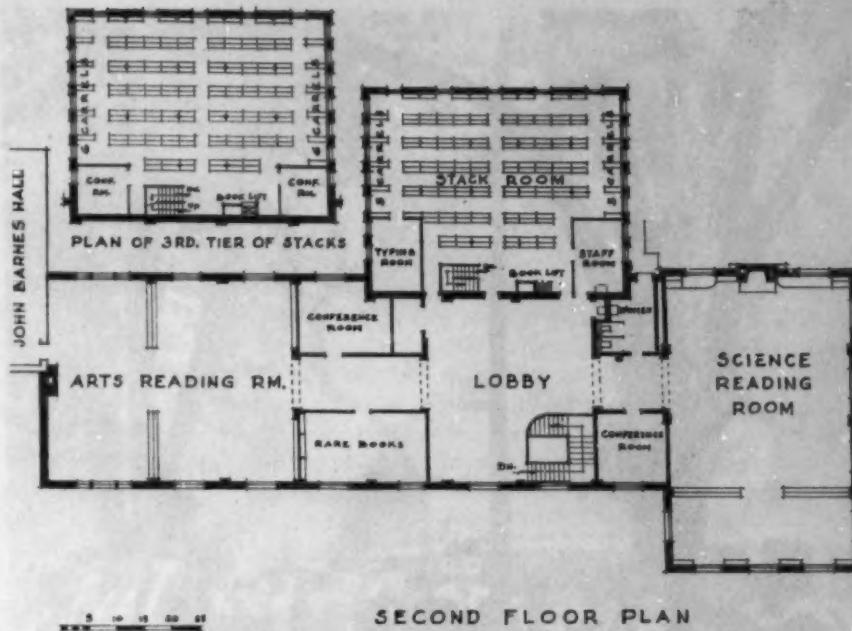
TRIM AND MILLWORK: Birch with water stain finish.

FLOORS: Linoleum and rubber tile applied over concrete subfloor.

CEILINGS: Suspended metal lath and plaster; acoustical type ceiling in stack room.

HEATING: Forced warm air.

VENTILATING: Forced.



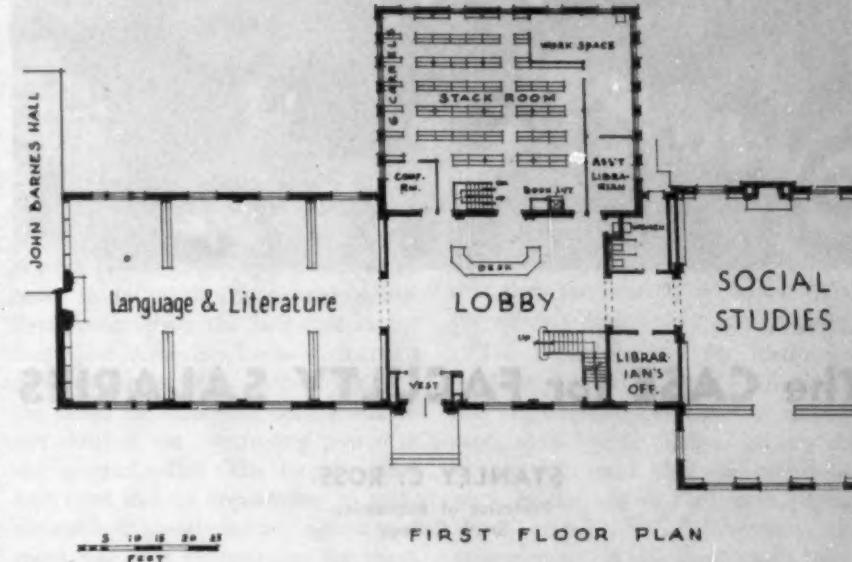
About the fireplaces, which are the decorative center of three of the four divisional rooms, are grouped home library furnishings, consisting of leather covered wing chairs and love seats, wool upholstered semicircular sofas, occasional tables and interesting reading lamps. The decorator, Mrs. Jessica Treat of Rockford, has picked up colors from the mantelpiece paintings for use in her decorative scheme for the informal reading areas. One room may be green and yellow; another, terra cotta.

Upon entering the first floor lobby, the noninstitutional aspect of this library at once influences the visitor. Not cold marble but warm wood and the colorful jackets of books greet the student. The traditional high charging desk has given way to a low home type of library table built to specifications.

All trim is of water-stained birch. Three of the divisional rooms are provided with maple furniture in traditional styles but the science room appropriately is modern. In this room the curved wood and steel-trimmed fireplace is continuous with pigskin covered window seats that end in table-high corner bookshelves surmounted by lamps with base and shade of leather. Furniture is of oak.

In the rare book room, kept locked except upon request or for occasions, wall hangings of antique Japanese batik and a Chinese silk embroidery of ancient date are protectively mounted under glass with a simple molding finish at top and bottom.

Natural lighting is so abundant that little daytime assistance is required.



Artificial lighting is indirect, except for the decorator's lamps in the lounging area of each of the four divisional rooms.

The building is heated by forced warm air supplied from a steam type of preheater and conditioning unit located in the basement. Steam for the preheater is furnished by the municipal power plant. The air is tempered by the preheater and then forced to the individual rooms through a duct system with the supply located in the ceiling and the return located in the walls at the floor line.

The system is so designed that ventilation is accomplished through the same duct system by eliminating the operation of the preheater.

Rubber tile is used for the stack room floors; linoleum is the floor covering in reading rooms and lobby. The steel carrels have desks of adjustable height and their tops are of linoleum in a series of solid colors.

College officials and architects from various sections have been converging on Rockford College of late for ideas that they can incorporate in their own library plans. President Mary Ashby Cheek and the faculty feel that the college teaching program is being well served by the building, completed in 1940. That the 400 students soon get lost in study or recreational reading is apparent from the informal poses they assume. Books and building are theirs to enjoy and protect.



The CASE for FACULTY SALARIES

STANLEY C. ROSS
Professor of Economics
Smith College

SIMITH COLLEGE, ALWAYS CAREFUL of the standing and prestige of those on its teaching staff, has long drawn its personnel not only from the best material in this country but from other nations as well. Among its professors are those of international as well as national reputation. To maintain these high standards demands constant vigilance and an increasing financial power.

How is a faculty like Smith's built up and how is it maintained at a high level?

First, the administration of the college must be in a position to call notable men and women to its professorships directly from other fields and, when necessary, from other institutions of learning. This means that the

administration not only must be able, by its own excellence, to recognize distinguished accomplishment, but must have at its command sufficient funds with which to implement a call to those possessing desirable characteristics.

Second, it must have a definite plan for recruiting outstanding young scholars as instructors and assistant professors within the college, and it must have the necessary funds at its command to make such positions attractive for a short run and for the future so that the young scholars will remain as the core of the coming generation of faculty members.

Both methods demand sufficient funds and neither may successfully be used by itself. If recruitment of

faculty is solely from other fields and from other educational institutions, then the continuing tradition of Smith will suffer; if, on the other hand, recruitment is only at the lower levels of instruction, then the evils of institutional inbreeding will, sooner or later, overtake and overwhelm the college.

Smith College is unique in its field in that it has always held as an ideal that its faculty should be divided approximately equally between men and women. Although the ideal has never actually been reached, men have numbered between 30 and 40 per cent of the total faculty group. The college feels that there is good and sufficient reason for holding to this ideal. Keeping to it, however, imposes an extra burden because it thus comes into direct competition for its faculty not only with other colleges of its own class but also with men's colleges and with universities. A great number of both the latter are much more heavily endowed than is Smith.

There is, moreover, a peculiar psychological situation in keeping men on the faculty of a women's college. If their numbers begin to lessen, there will be a violently accelerated hegira from the campus. Much as they love and respect the women faculty members, the men just do not want to be too greatly outnumbered. One may smile at the situation, but one is forced to recognize this added difficulty in the way of the administration at Smith. The institution, therefore, must take decided note of the situation as a whole, seek for a significant amount of added funds for support of faculty salaries and promptly take steps to increase the upper limits of all faculty salary grades.

Although the previous discussion had in view the higher grades of faculty, much the same situation holds for those who enter the faculty at the lower grades. If they are successful in their work they should be retained on the staff, but this very success makes them attractive to competing institutions which, all too frequently, are able to draw them away by the offer of better salaries. It is all well enough

to talk about scholastic loyalty and about classroom endeavor being above mundane and financial considerations, but a college professor must eat. No blame or stigma can be attached to him for wanting a better salary and for accepting it if one is offered.

Not only is the competition offered by colleges in our class serious enough to demand an advance in our faculty salaries but we find the competition presently offered by industry and by government a potent magnet drawing faculty members away from the college campus.

In the years immediately before the war, industry had conceived a growing desire for the services of men and women from our colleges. First of all, the call came for scientific specialists, then for members of every department. What was a significant demand, and a disturbing trend from the standpoint of college administrators before the war, has now become an insistent one. Scholars are finding that their professional services are in demand in business and in government, and they are finding that both branches are willing to pay better salaries than are offered on college campuses.

In common with many other institutions of high rank, Smith will thus have to enter a more highly competitive field to obtain its faculty members, and, to be frank, it is a field in which money speaks most fluently.

Although the competitive tempo is thus stepped up for Smith as it continues to maintain its high faculty standards and its desired percentage of men on the faculty, the competitive conditions are but little less powerful when the women faculty members are being considered.

Time was when about the only serious competition for the women on the staff came from our sister colleges. That was strong enough, for several of them are better endowed than is Smith, and, understandably enough, they were prone to use the power which was thus theirs to strengthen their faculties.

Today we find that the great coeducational universities are willing to give outstanding women high rank and high salaries, again increasing the competition in which Smith

must operate. Industry, too, cares little who does the job, whether it is man or woman, just so the job is done. The net result is that competition for good faculty material is now keener than it has ever been, and no sign of let-up is to be seen. It is a type of competition which can be won only by that institution which is best equipped with the sinews of war, namely, financial backing.

So much, now, for the interest of the college itself. Let us turn to the individual faculty member who has firm and righteous reason for asking for an advance in his salary. Living costs have gone up. They have, forsooth, gone up just as much for faculty members as they have for members of the C.I.O. or the A.F. of L.

The U. S. Bureau of Labor Statistics has indicated in its releases that the cost of living has gone up from 30 to 35 per cent since the beginning of the war. The bureau's figures are, in the very nature of their construction, prone to give a figure that is too low. The actual increase, taking into consideration the deterioration of quality as being really a rise in price, is probably in the neighborhood of 45 per cent. This means that the faculty dollar, like all other dollars, has a present purchasing power of about 70 cents in terms of the prewar dollar. Even considering the fact that in the meantime there has been an increase in many faculty salaries of 10 per cent, the salary of today has only about 76 per cent of the purchasing power of the prewar salary. The faculty members have had no opportunity to make unusually high salaries during the war; there has been no overtime for them.

In line with wage increases which have been allowed in industry, the faculty must be given an increase or it finds itself at a disadvantage, and a rapidly mounting one. After all, most industrial workers had the benefit of the Little Steel Formula during the war, which increased their wages, on a straight time basis, by approximately 15 per cent.

In the postwar adjustment that is now taking place, it is evident that something like another 18 per cent is being allowed. This will make, over the prewar level, an increase of approximately 36 per cent which is about offset by the rise in living costs, not quite, but almost. It is hardly fair to do less for the faculty than for industry. If Smith does make increases of anything like that amount, however, there will have to be a decided increase in its endowment immediately by a support of faculty salaries.

This increase should be for all grades of the staff. Particularly is it needed by the young instructors and assistant professors. They are the ones who are of the age to begin raising a family and they should be in a position to do so. They should be in a position, too, to give their children the benefits of ordinary American standards of living. It is a brutal fact that they can scarcely do so today on the salaries which they are receiving.

The average salary for instructors at Smith is little more than \$2000 and for assistant professors it is little more than \$3000. These, too, are the people who must be doing additional work in the way of their own professional preparation. If, therefore, the young man in an instructor's position

wants to equip himself for his work, he cannot raise a family until later, which frequently turns out to be too late. Conversely, if he wants to raise a family, he will have to sacrifice his professional future on that altar.

Certainly no college as outstanding in the field as is Smith would ask such immolation in the cause of education. In essence, however, it will continue not only to ask it, but to demand it, if more money is not forthcoming with which to make possible increases in faculty salaries as required.

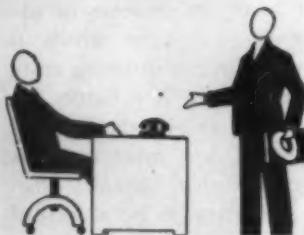


GOOD PUBLIC RELATIONS

Policy is determined on administrative level, but—

it must be practiced

all



the

way

down

IF I HAD A MILLION DOLLARS TO give away for the advancement of education, there are many colleges and universities that would get no part part of it.

I have visited those schools, written them letters, called them by telephone. For all the colleges knew, I might have been a millionaire casting about for an institution upon which to bestow my unneeded funds.

As I think back over my experiences, however, there comes to mind only one college which made such an impression upon me that I have since carried the desire to do something for it.

This does not mean that my treatment at all the other schools was bad. In some instances it was even good. But only in the one instance was it superior, sufficiently outstanding to make an impression that has remained with me through the years.

College administrators and public relations directors need to keep constantly in mind that it is not enough just to be good in relationships with the public. That may be sufficient to ensure against ill will, but it does not bring about positive good will. Public relationships and public services must be "better than good" to make a lasting impression upon the mind of the recipient.

Gradually our colleges and universities are stumbling and groping toward effective public relations, but most of them still have far to go. The

HAROLD K. SCHELLINGER

Director of Public Relations
Ohio State University

two greatest obstacles in their progress are a failure on the part of the administrators to grasp the full meaning of the term "public relations" and their unwillingness to pay the price in careful attention to small details.

The public relations program needs to be conceived and encouraged on the policy, or administrative, level, but its most effective applications are on the lower levels among lesser employes in daily contact with the public.

TELEPHONE GIRL IMPORTANT

If we pause to think of our own everyday experiences, we realize that our impressions of the public relations policies of transportation companies do not come from what the presidents of those firms have said or done. We form our opinions entirely on our treatment at the hands of ticket agents, trainmen and stewardesses. With the oil companies, it is the service station attendants; with the dairy companies, the delivery men, and so on through most of the firms with which we deal.

The real crux of the public relations program, therefore, is the treatment of the customer at the point of contact. That goes for the office and telephone girls in colleges and universities just the same as in commercial firms and industries.

Many of our educational administrators still think that public relations is only a high-sounding synonym for publicity, and there they make a serious error. Publicity is little more than what we say or what is said about ourselves. Public relations goes far deeper, to what we really are.

The publicity director, working without the support of a thorough-going public relations program in his institution, is like the top-flight advertising man who by attractive copy brings purchase-minded individuals to the store, only to have them driven away by discourteous sales people. Publicity, like advertising, does not in itself complete the deal nor should it ever be expected to accomplish this goal.

The second obstacle to good public relations, beyond an understanding of the term, is the inertia to which many colleges and universities are addicted. In many respects, the nation's educational institutions have come out from their ivory towers into a closer relationship with the workaday world. In their public relations and business practices, however, many still lag far behind the time. That is surprising, too, since colleges are dependent to a large extent on public support and understanding for their very existence; moreover, all about them they see ex-



emphasized good business practices which are winning public approval day after day.

Many schools, particularly the larger universities, do not know their own strength, were they only to practice what they preach and make use of the specialists they have on their faculties—in industrial management, business correspondence, accounting and other fields. Those experts usually are left to the job of telling others how to run their businesses rather than being utilized by the college in improving its own practices. It is too often a case of "do as we say, and not as we do."

Among the things such specialists would recommend to college administrators, were they given the chance, are the following:

- **SIMPLICITY.** Simplify record systems, eliminating irritating red tape and delay on the part of those wanting to do business with the school. Few are the colleges that take full advantage of modern business machines and record systems.

- **RESPONSIBILITY.** Accept a responsibility to the public in the form of regular business hours, rigidly maintained throughout the year. Many colleges have the habit which is irritating, to put it mildly, of tossing in extra holidays or closing early because it is too hot or too cold with utter disregard of persons who may have come many miles to do business with the institution at that particular time.

- **TRAINING.** Give personnel adequate training so that the public may be well served. All employees need both original training and occasional "refreshers" to keep them constantly alert. A whole day's instruction may be provided on the proper use of the telephone alone. One of the difficulties is that many college employees have never worked anywhere else; they don't know what goes on in modern business offices these days. Occasional visits to offices might be in order.

- **PRINTING.** Give careful attention to printing. Institutions wanting students at \$500 a year and those receptive to \$1,000,000 gifts need to look and act as if they were worthy of such sums. Notice the difference between the advertisements for dime stores and those for higher priced quality merchandise. If a college wants to have a place in the quality class, it should keep its

printing—catalogs, viewbooks and similar items—on the higher level.

- **CORRESPONDENCE.** See that correspondence is well handled. Much of what has been said regarding printing also applies to correspondence. Many people form their opinion of the school entirely on the basis of a single letter. It goes without saying that letters should be answered promptly. The parent who writes to a college about his son or daughter is discussing the most precious thing in his life, and the institution should respond accordingly. I know of one parent who sent his son to a certain eastern college because that school's correspondence regarding the prospective student was friendlier than that of the others. The parent thought that a school writing such friendly letters would give his son more personal attention through his four college years.

Duplicating machines have their place in business but they are being used far too often by colleges in their relationships with parents. The cruellest of all such uses, in my opinion, is the sending of a duplicated letter telling a parent that his son or daughter has been dismissed from the school.

These are perhaps the most outstanding of the shortcomings in our colleges and universities, aside from those which may exist in the academic activities of the institution.

The need for attention to every detail of college operation is more important today than ever before. Many institutions already have the largest enrollments in their history, and the numbers of their students are likely to increase steadily for some time to come. The peak may not come until a period of unemployment, when large numbers of discharged G.I.'s now working in industry will turn to college campuses to take advantage of the educational provisions of their "Bill of Rights."

Some colleges now find themselves almost hopelessly swamped in trying to care for enlarged student bodies. Long lines stand outside admission and registration offices. Letters pile up at such a rate that correspondence may not receive an answer for several weeks—sometimes never, if the applicant does not seem to fit the college's requirements. In the larger schools, at

least, the incoming student definitely is not getting the personal guidance and attention his brother received during depression or war.

Today the prospective student needs assistance just as much as ever in planning his work. During the depression and in the war period, the student was king. Colleges sought to attract him and to please him after he arrived. Today the situation is quite different. Schools have more students than they can handle. Universities like to think that they exist for the students, but so long as the quality of their service depends upon their need for the student, rather than his need for them, one cannot help wondering about the sincerity of the claims.

The present situation offers a great challenge for our educators. By meeting it, they will be advancing the cause of higher education for years to come. It goes without saying that the returned veterans now thronging our campuses will be the men in power in the future—in public offices and in places of business leadership. They will carry with them pleasant or unpleasant attitudes toward higher education, dependent upon the manner in which they are treated today.

Some weeks ago a small town merchant came to me with a request for publications that would help him do a better job of public relations for his firm. Finding little printed matter that applied to his situation, I volunteered some suggestions of my own. They seem equally applicable to colleges.

I advised the young merchant to make a list of all those things that pleased him in his relationships with others and then to see that all those practices were followed in his own business. As a second and related step, I urged him to list all the things that irritated him in his relationships with others and to see that none of those things happened in his own store.

With these concrete suggestions to work upon, I advised my friend to see that the Golden Rule was observed in his firm by every person from owner to janitor and to endeavor daily to treat others as he would himself be treated.

By following this simple program, colleges and universities, as well as business firms, will have a good start toward better public relations.





THE MOST OPTIMISTIC PREDICTION OF the number in the armed forces who will take advantage of the educational provisions of federal legislation has already fallen far short of the mark.

Although the exact number of the veterans enrolled in colleges and universities last term was not available when this article was prepared, it was probably in excess of a quarter of a million. The congestion that began in a few of the "name" colleges has now spread to include a considerable proportion of institutions of higher education.

It is likewise impossible to determine accurately the number of veterans who have applied for admission, as many have applied to half a dozen institutions simultaneously. Again, it is probable that the backlog of such applicants is another 250,000.

Even more important as a basis of prediction is the number of veterans who have applied for their certificates of eligibility and time entitlement. This number began as a small trickle, gradually increased and, since January

THE G.I.'S PLACE IN THE CAMPUS PICTURE

DR. FRANCIS J. BROWN
American Council on Education

I, has reached a total of almost 15,000 a day. As of March 31 the number of such applicants was in excess of 2,000,000, more than twice the number originally predicted as the maximum under the G.I. Bill.

On the basis of these facts it is reasonable to assume that there will be at least three fourths million veterans in our colleges and universities in September. This number will continue for from three to five years, the backlog of those unable to be admitted taking the places of those who have

From an address given before the Southern Association of College and University Business Officers.

already completed their education. For the next five years veterans will make up approximately 75 per cent of the enrollment in men's colleges and from 30 to 50 per cent of enrollment in coeducational institutions. Following this maximum period, the numbers will decline for the remainder of the life of the act, a date not yet determined, as it will extend nine years beyond the time when our Congress or the President declares the termination of World War II.

The G.I. has himself dissipated a number of the misconceptions inherent in early planning for veterans' education. As late as a year ago there was

considerable talk about the veteran being emotionally unstable, maladjusted and bitter. Fortunately this has been proved false. Even those who have suffered physical disability have tended to accept their changed circumstances with courage and a deep desire to overcome the losses of war.

A second misconception was that a separate place had to be made for the veteran student through special courses and segregated activities. Some institutions went so far as to set up classes exclusively for veterans. Again, the veteran has vocally and by the readiness of his adjustment indicated his desire to be an integral part of the life and activities of the campus. He has demonstrated that he desires to forget his "veteranness" as quickly and as completely as possible.

A third misconception was that if the veteran came he would attend primarily because college life offered a sense of security in a pleasant environment. These months of experience with G.I.'s have demonstrated that the veteran is by and large more serious in his work, more eager to attend and procures on the average higher marks than does the nonveteran.

There are, of course, individual veterans who do not fit into this general pattern and for whom the institutions must continue to provide sympathetic counseling, individual help and, at times, strict holding to the line of academic achievement. But there are nonveterans who are problem cases, too.

PAYMENT FOR SERVICES

The unprecedented acceleration of veteran enrollment has already created a number of serious problems that are of special concern to the business officers of our colleges and universities. First, and perhaps in some respects the most important, is that of payment to the institution for services rendered to the veteran.

When the G.I. Bill was first enacted the Veterans Administration ruled that the law did not authorize it to pay one cent more for a veteran than the institution was receiving for a nonveteran taking the same courses. It was a heart-warming experience to hear a member of the legal staff of the Veterans Administration say to me only within the past few weeks: "It may be necessary, if the government is to carry its legal responsibility for the payment of veterans' education, to negotiate a contract with all institutions."

This is a long step forward, and I am glad that the American Council on Education and many organizations have consistently worked to this end. The Dec. 27, 1945, amendment to the G.I. Bill provided two important changes: (1) it did away with the possible deduction from a future veteran's bonus, thus taking the institution out from behind the eight ball if it charged more for a veteran than for a nonveteran; (2) it used the specific phrase, "cost of teaching personnel," rather than the vague, indefinable phrase of the original act, "cost of tuition."

SUMMARY OF CHANGES

In a recent bulletin, "Higher Education and National Affairs," published by the council, the major changes embodied in Veterans Administration Regulation 47 were summarized. Briefly this regulation makes four fundamental changes.

First, contracts are now negotiated entirely with the regional office of the Veterans Administration which, within the general policies established by the national office, has full authority to negotiate contracts and make payments thereunder. This brings the point of contact through the more than 50 regional offices close enough home so that working relationships can be personalized.

A second change is that a definite formula is provided on the basis of which the cost of teaching personnel is to be determined on a per student semester hour basis. To this amount are to be added "all customary fees that are not designated as tuition fees, such as hospital or health, library, incidental, student activity, student union, diploma, matriculation, laboratory and course fees."

Third, Circular 47 also specifically states that contracts may be made effective with the beginning of the first term or semester subsequent to the signing of the amendment in December 1945 and may be adjusted at any new contract period. Thus, if an institution in actual operation under a contract finds that payments from the Veterans Administration are inadequate or in excess, they may be changed in the renegotiation of a new contract.

The fourth change is a minor but rather an important detail in that it provides an opportunity for the institution furnishing books, supplies and equipment to veterans to be compensated for such service on the basis of 10 per cent of the customary charge.

Although it is recognized that the cost of teaching personnel and incidental fees will not totally cover the instructional and administrative expenses of veterans' education, institutions will willingly bear their fair proportion of the cost. This new provision will, however, go far toward equalizing payments to institutions and lessen the distinction between those of relatively high fees and those with relatively low or no tuition.

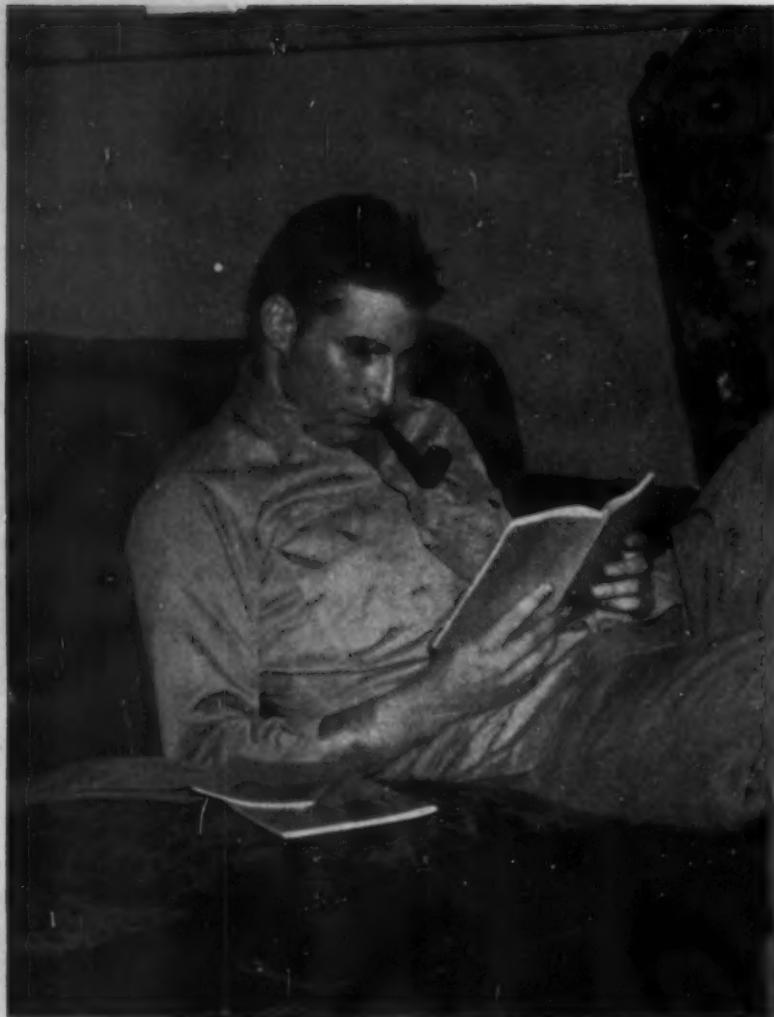
It will do so, however, only if institutions take the initiative, procure copies of the circular, determine payments on the basis of the formula presented, compare such figures with present payments and negotiate a contract if it then seems desirable. While applying officially to veterans under 346, it is reasonable to assume that the same basis of payment can be applied to veterans under P.L. 16.

The interest of the American Council on Education in constantly seeking higher payments to educational institutions has been not to relieve institutions of any portion of their obligation for veterans' education but rather to make it possible for all institutions to provide the quality of education to which the veteran is entitled. Such increased payments ought under no consideration to decrease the sense of financial responsibility of the institution or the state in maintaining the quality of higher education.

LIKE TREATMENT FOR ALL

A second problem resulting from the increase in veterans' enrollment is that of maintaining a balance between veterans and nonveterans. Institutions are already under pressure to give veterans preference. Veterans' organizations will be quick to pick up any selective factors established for veterans that are not applied also to nonveterans. There are those that even now maintain that the veteran has a prior right to the high school graduate. Colleges and universities cannot afford to exclude either at the expense of the other.

A large institution that normally accepts 2400 high school graduates has stated that in September it will admit only 1600. If this pattern becomes general, the losses of war will be extended to those too young to be participants in it. Colleges and universities are abiding institutions. They will exist long after the need of the veterans.



The G.I. is more eager, procures higher marks than does the nonveteran.

eran has been met. They cannot afford, in the interest of public relations alone, to close their doors against those who are their continuing clientele.

The nation cannot afford to have an unwanted generation of youth. That this is already happening is indicated by the fact that juvenile crime has increased approximately 20 per cent within the last year, according to the most recent report of the Federal Bureau of Investigation. Age 17 is the most frequent age on the police blotter; age 18 is second most frequent.

A third problem is that of establishing methods for the selection of veterans which are on an objective basis and which can be explained to the veteran and to those who are looking for veterans' causes to champion. The easy way, of course, is to require two to four years of a foreign language, two years of high school mathematics or any other objective but meaningless combination of courses.

However, the easy way is not the right way. Federal legislation has made

higher education available to hundreds of thousands of men for whom it appeared a total impossibility during the years that they were adolescents in high school. Many have had a rich educational experience in the armed forces; others had little that might have educational value.

There is only one fair and objective basis, however, and that is a system of selective examinations: through the use of the General Educational Development or equivalent examinations. When such examinations are required, they must be required also of non-veterans lest the cry of discrimination be raised and with some justice.

A fourth problem, one with which the council is now working, is that of the records and reports required by the Veterans Administration. This much should be said from the point of view of the government agency. It is entrusted with the expenditure of vast funds of federal money; it is necessary for it to document such expenditures. We are hoping, however, that

such documentation can be simplified, and conferences have been held with appropriate federal representatives.

I have thus far made no reference to two other problems faced by higher education. One is that of housing; the other is that of procuring faculty members.

While the housing problem is the most dramatic, everything that can be done on a national basis is being done. Of the first \$190,000,000 for temporary veteran housing, 30 per cent went to colleges and universities. Of the additional \$253,000,000 recently made available by the Congress, 55 per cent has been allocated to provide housing on college and university campuses.

Through official regulation of both the Civilian Production Administration and the Federal Public Housing Administration, the principle of equivalency has been established. Temporary housing can be occupied by nonveterans provided the institution certifies that the new housing increases the enrollment of veterans proportionately to the number of units provided.

Other steps can be taken locally. The most important is that of the referral of veterans to other institutions. The New York plan of several institutions combining to administer a resident university center in a now surplus war housing area may provide additional facilities for many institutions. Colleges and universities must think in large terms and translate such thinking into reality. If they fail, some federal system of education will be established.

The faculty problem is more difficult and more intangible. The American Council on Education in cooperation with the Veterans Administration and the armed forces has procured the release, independent of the point system, of some 300 former or prospective faculty members. This procedure has now been taken over by the U. S. Office of Education. It will undoubtedly be necessary, however, for institutions to forsake two of their ancient heritages: one, that a Ph.D. is a necessary requirement for college teaching and the other, that college teachers should not be supervised.

I cannot be too alarmed about the faculty situation though I recognize its seriousness. Many among those who are returning from the armed forces have had extensive teaching experience and, with supervision, can do an equally effective job of instruction on the college and the university campus.

One institution, for example, has adopted an almost tutorial system in which veterans who have had a background of mathematics are assisting those who need personal help in this field while they, in turn, are being tutored in English by another veteran. A member of the faculty provides the necessary coordination and supervision of the program, and, by this means, the mortality among veterans has been cut almost to zero. Again, courage and vision are necessary, but the problem can be resolved.

One other issue should be increasingly recognized by colleges and universities. Through all of the drafting of the legislation, out of which Public Law 346 emerged, the American Council on Education together with other educational organizations maintained that the responsibility for education was a state and local function. This principle is embodied in the law. It has not been changed by any amendment. It has, however, been changed, first, by failure on the part of many of the state agencies to take their

responsibility seriously for the approval of educational institutions and training establishments and, second, by the action of the Veterans Administration, which, through Circular No. 61, has taken unto itself the responsibility for inspection of veterans in training and education.

Personally, I cannot be too critical of the Veterans Administration in taking this action. Even though the law makes the state agency the responsible agent to prevent abuses in veterans' education and training, the general public will hold V.A. responsible.

The answer to Circular No. 61, in my judgment, is for the state agency immediately to add sufficient personnel to its staff, develop definite standards and criteria and do the job which by law was placed in its hands. Higher education cannot hold itself aloof from sharing in this responsibility.

Malpractices are already creeping into higher education. Under pressure of admitting veterans, classes have been increased in size beyond the point of good teaching. Some institutions

have established intensive courses with fees out of all proportion to those paid for the regular courses. Technics of mass instruction developed by the armed forces may be used, but if they deter the establishment of close faculty-student relationships, they will prove detrimental not beneficial.

The vast amount of federal funds will be a sore temptation to some institutions, but the G.I. bill (P.L. 346), the Veterans' Vocational Rehabilitation Bill (P.L. 16) and P.L. 113, the vocational rehabilitation of those disabled in industry or otherwise, were not enacted to aid colleges; they were enacted to help the veteran compensate for the inevitable losses of war. The veteran and his best interest must be kept constantly in the forefront.

These are but a few of the many and varied problems which higher education must face over the next decade. There must be coordinated effort on the part of government, the state agencies and institutions if higher education is to meet the serious challenge of these postwar years.

PRESIDENT NAMES EMERGENCY COMMISSION

PRESIDENT TRUMAN HAS APPOINTED George F. Zook, president of the American Council on Education, chairman of a special commission to deal with the emergency in education caused by the overflow enrollments of students in colleges and universities.

John R. Steelman, war mobilization and reconversion director, will act as liaison official between the commission and branches of the federal government. Dr. Francis J. Brown of the American Council on Education staff is secretary of the commission.

The President's commission compiled data during a three day session in Washington in July at a Conference on Emergency Problems in Higher Education. Appointment of the commission was made on the final day of the conference. Members of the President's commission are:

Arthur H. Compton, chancellor of Washington University, St. Louis.

Harold W. Dodds, president of Princeton University.

Earl McGrath, dean of the college of liberal arts, University of Iowa.

Algo D. Henderson, president, Antioch College.

Fred D. Patterson, president, Tuskegee Institute.

Sarah Blanding, president, Vassar College.

Milton Eisenhower, president, Kansas State College.

The Very Rev. Frederick G. Hochwald, director of higher education, National Catholic Welfare Conference.

Horace M. Kallen, dean of the graduate faculty of political and social science, New School for Social Research.

Alvin Eurich, vice president, Stanford University.

Goodrich White, president, Emory University.

John Emmons, president, Ball State Teachers College, Muncie, Ind.

Henry A. Dixson, president, Webster Junior College, Ogden, Utah.

Ordway Tead, president, board of higher education, New York City.

T. R. McConnell, dean of liberal arts, University of Minnesota.

Harry Newburn, president, Oregon University System.

George D. Stoddard, president, University of Illinois.

Martin R. P. McGuire, dean of the graduate schools, Catholic University of America.

Lewis Jones, president, Bennington College.

Fred J. Kelley, retiring director of the division of higher education, U. S. Office of Education.

Bishop G. Bromley Oxnam, president, Federal Council of Churches of Christ in America.

Rabbi Stephen S. Wise, president, American Jewish Congress.

Harold Swift, chairman, board of trustees, University of Chicago.

O. C. Carmichael, president, Carnegie Foundation.

Mark Starr, educational director, International Ladies' Garment Workers' Union.

Murray D. Lincoln, president, Ohio Farm Bureau Federation.

Eleanor Roosevelt.

Douglas S. Freeman, editor, Richmond (Va.) *News-Leader*.

Agnes Meyer, journalist and social worker, Washington, D. C.

FINANCING HIGHER EDUCATION

Here is a serious, factual study on investments, sources of revenue and related problems that will be helpful to business officers
in the light of today's uncertain economic world

J. HARVEY CAIN

Accounting Officer, Board of Higher Education
New York City

STATISTICS WHICH HAVE BEEN PREPARED over a series of years for the American Council on Education and which have appeared in bulletins of the Financial Advisory Service and in the *Exchange*, magazine of the New York Stock Exchange, have been brought up to date to determine trends in types and kinds of investments that colleges and universities are holding and the rate of return earned on such funds.

An analysis has been made of a group of 25 institutions which hold investments of \$15,000,000 or more each and which own total endowment funds aggregating \$1,164,882,000 as of June 30, 1945. During the year ended as of that date these institutions earned a composite average of 3.84 per cent on their invested funds, compared with 3.81 per cent in the preceding year. This rate of return was arrived at by dividing the income received during the year by the total of the endowment fund at the close of the year.

Another method of determining the average rate of return was selected. An average of the total investments held by these institutions at the close of June 30, 1944, and June 30, 1945, was taken and divided into the income received for the year 1944-45. This showed a rate of return of 3.93 per cent.

The total gifts and bequests made to this group of institutions during the year ended June 30, 1945, was \$61,318,000. Of this sum \$43,938,000 was for additions to endowment fund principal, or an increase of nearly 4 per cent in these funds. During the year one institution received an exceptionally large bequest of more than \$20,000,000, but even if this item is eliminated the average for the remaining institutions is just as high as in the previous five years.

A large per cent of college and university endowment funds is restricted as to use, i.e. its income may be used only for the purposes described in the deed of gift, such as chairs for various subjects, student aid, prizes, special library funds or other stated intent. A much smaller per cent is given for unrestricted use to be available at the discretion of the trustees. In this study it was found that only 23 per cent of

the total holdings of the 25 institutions is for unrestricted endowment.

During the year under discussion, many of the institutions disposed of securities of various types and realized net profits amounting to \$6,871,000. This profit represents an increase of 0.06 per cent in the investments of these funds as compared to net losses during the previous five years. Railroad bonds totaling \$6,500,000 were disposed of, and profits were taken in many common stocks. Of the 25 institutions, 23 realized net profits and two had net losses. One realized a profit of more than \$1,000,000 and four realized profits of more than \$500,000 each.

25 INSTITUTIONS SURVEYED

Amherst
California
California Tech
Carnegie Tech
Chicago

Columbia
Cornell
Dartmouth
Harvard
Johns Hopkins

Mass. Institute of Technology
Michigan
Minnesota
Northwestern
Oberlin

Pennsylvania
Princeton
Rice Institute
Rochester
Stanford

Texas, University of
Texas A. & M.
Vanderbilt
Washington (St. Louis)
Yale

Approximately two thirds of the income of the permanent endowment fund of the University of Texas is available to that institution; the remainder goes to Texas A. & M. College. Although Duke University has an equity valued at much more than \$15,000,000 in the investments held by the Duke Endowment, the university is omitted from the list because it does not actually administer the fund.

This group of 25 institutions, representing less than 2 per cent of all institutions of collegiate character in the continental United States, holds nearly 70 per cent of all endowment funds as reported to the U. S. Office of Education. Evidence seems to indicate that over a long period of years these institutions have managed their funds to the complete satisfaction of their friends and benefactors and are, therefore, continuing to receive generous support in additions to these funds. Thus, successful management is rewarded in college life the same as it is in business and industry.

During the war years 1941-45, the invested funds of these 25 institutions increased by more than \$200,000,000. Ninety-five per cent of this sum was invested in federal government bonds. The total portfolio, therefore, showed an increase of 8.7 per cent in total bond holdings; real estate and mortgages were decreased about the same amount, and preferred stocks and common stocks retained about the same percentages of the total holdings.

Nine of the 25 institutions had increases of more than \$5,000,000 each in their portfolios during the war pe-

riod. The rate of return on these funds decreased 0.32 per cent during the four years 1941-45 from 4.16 per cent to 3.84 per cent. This compares with the same percentage decrease of 0.32 per cent in the earnings of insurance companies, 0.27 per cent in the interest paid by savings banks and 0.16 per cent in the yield on 30 AAA bonds (Moody's index).

- **MONEY RATES.** The chairman of the Federal Reserve board of governors and many prominent economists say that a demand is growing to halt the decline in interest rates and to turn the rate upward even for long term bonds. They point out that low interest rates are inflationary, offer no inducement to save and that prospects for family security are diminishing.

Lewis W. Douglas recently testified before the Senate banking committee that if interest rates had been 1 per cent higher in 1945, life insurance companies would have increased dividends to their policyholders by at least \$323,000,000. By the same calculation the colleges of America could have increased their income by about \$18,000,000. No doubt colleges and universities as a class are suffering severely from the low interest rate.

The annual report of Westinghouse Electric Corporation illustrates the typical situation affecting industry when it states: "Our 1945 dividends represented a return of only 4.4 per cent on the value of the stockholders' equity in the company and less than 2 per cent on the volume of business. Thus the stockholder is getting less and less in return for larger investments and greater risk of that investment."

Such facts as these would seem to prove the theory of those who cite low interest rates as a continued discouragement to thrift, the removal of incentive to long range investment and a policy working to the detriment of the people in general. Nevertheless, this creeping paralysis in the earning power of money is not altogether perceptible in financial statistics. The volume of money seeking investment through insurance, savings banks and stock markets is mounting constantly. The statistics of life insurance companies and savings banks show the phenomenal growth of money seeking investment. A persistence of low money rates may destroy the thrift habit of the American people and do permanent injury to eleemosynary in-

Table 1—COMPOSITE INVESTMENT FUND OF 25 AMERICAN COLLEGES AND UNIVERSITIES

BONDS	Amount June 30, 1945	Per Cent of Total
U. S. Government.....	\$274,995,431.00	24.58
Municipals.....	25,543,820.00	2.28
Canadian and Foreign.....	16,038,983.00	1.43
Utilities.....	85,058,084.00	7.60
Industrials.....	48,629,061.00	4.35
Rails.....	56,802,909.00	5.08
Others.....	1,970,485.00	0.18
TOTAL BONDS.....	509,038,773.00	45.50
PREFERRED STOCKS		
Utilities.....	40,962,637.00	3.66
Industrials.....	53,542,190.00	4.77
Rails.....	5,190,102.00	0.47
Others.....	1,902,018.00	0.17
TOTAL PREFERRED STOCKS.....	101,596,947.00	9.07
COMMON STOCKS		
Utilities.....	31,145,154.00	2.78
Industrials.....	185,348,707.00	16.60
Rails.....	10,780,398.00	0.95
Insurance.....	15,623,443.00	1.39
Bank and Other Financial.....	33,024,827.00	2.95
Others.....	5,360,784.00	0.48
TOTAL COMMON STOCKS.....	281,283,313.00	25.15
MORTGAGES (including real estate bonds and stocks).....	41,528,311.00	3.71
REAL ESTATE.....	139,611,618.00	12.48
INVESTMENTS IN INSTITUTIONAL PROPERTY.....	16,577,682.00	1.48
PERSONAL LOANS AND NOTES.....	214,905.00	0.02
ENDOWMENT FUNDS LOANED TO OTHER FUNDS.....	2,932,556.00	0.26
OTHER INVESTMENTS.....	14,240,257.00	1.27
UNINVESTED CASH.....	11,861,971.00	1.06
TOTAL.....	\$1,118,886,333.00	100.00

stitutions and the fixed income class dependent upon them.

Because of the weight of public debt service, however, the consensus is that low rates will continue to prevail. Opinion among government experts, financial experts and economists is certainly divided on the question of money rates. The administration seems to have control, for the present at least, by so conducting its affairs as practically to regulate the rate.

- **STATE AND LOCAL GOVERNMENT SUPPORT.** The foregoing facts and figures seems to emphasize forcefully (1) that the major portion of the endowment funds of the country is held by a comparatively small group of large institutions and (2) that with the rapid increase in college education during the last half century it has become increasingly necessary to call upon state and local governments for substantial assistance.

Private philanthropy is not sufficient. Government is now furnishing more than 40 per cent of annual operating revenue, and productive en-

dowment only 11 per cent of total income of all institutions of higher education. This does not mean that endowment funds are disappearing or are no longer being sought. As a matter of fact, during the last two decades the total principal of all college and university endowment funds has doubled. The rate of return on these funds and the purchasing power of the dollar, however, have dropped to a point where the increase in principal has meant little toward an increase in operating revenues. Nevertheless, many publicly supported institutions are actively seeking to increase their endowment funds. California and Michigan are examples of universities that have successfully raised funds comparable with the large endowed institutions in the East.

One reason why state institutions desire to increase endowment is easy to understand. They are seeking these funds in order to carry on certain essential functions for which it is difficult to obtain public funds. A second reason, and a more important one, is to be able to finance activities which,

in the judgment of educators, are highly desirable and in conformity with practices in private institutions. These projects cannot be accomplished now because of required political approval.

The greater the number and variety of sources of income an institution has, the greater should be its independence. This is extremely interesting in the light of the tremendous effort now being made to obtain federal funds for the support of higher education and the arguments for and against such a program.

Colleges and universities generally have a limited number of sources of financial support: private gifts, endowment, student fees, federal, state or local government. It is possible to present a good case for or against any of these types of support. Some say that large gifts are vanishing and that endowment in the future must be built up by many small gifts. Endowment, they argue, was satisfactory when income was stable and it could be depended upon more confidently than student fees or the whims of budget directors.

Some people feel that large endowments commit an institution to a policy of protecting vested interests and even present the bugaboo of tying up too much capital in this form. The danger seems rather remote, however, when one considers that Harvard University, which has one of the few large funds, has been unable after 300 years to collect sufficient endowment to support more than half of its regular operations.

On the other hand, it is said that college funds furnish large capital for private enterprise. Although trustees may on occasion unwittingly invest in business ventures which do not seem appropriate vehicles for their support, as a rule the main objective of the college investment manager is a sure and steady income.

Claim is made also that tax free endowment represents a substantial subsidy and, therefore, all endowed funds should be taxed. Many institutions now pay heavy real estate taxes and practically all of them do so on investments of endowment funds in real estate. On the other hand, it may be pointed out that the government would have to make a tremendous investment in plant to replace private schools and colleges and in support of private institutions now serving various communities. In view of the

Table 2—PERCENTAGE DISTRIBUTION OF TOTAL PORTFOLIOS OF 25 INSTITUTIONS HOLDING MORE THAN \$15,000,000 EACH, BY FIELD AND CLASS OF INVESTMENT, 1938 TO 1945

	1938	1939	1940	1941	1942	1943	1944	1945
BONDS								
Government and Municipalities	8.0	8.6	8.2	9.8	11.4	15.8	21.4	28.3
Utilities	13.7	12.8	12.6	11.3	10.8	10.3	9.1	7.6
Industrial	7.1	6.9	6.5	5.8	6.3	5.9	5.0	4.3
Rails	10.5	8.5	8.5	8.2	6.8	6.4	6.3	5.1
Other	1.8	3.5	2.3	1.7	1.3	0.3	0.1	0.2
Total Bonds	41.1	40.3	38.1	36.8	36.6	38.7	41.9	45.5
PREFERRED STOCKS								
Utilities	3.3	3.4	3.9	4.4	4.4	4.1	4.0	3.7
Industrial	5.1	5.1	4.8	5.1	5.0	4.7	4.7	4.8
Rails	0.7	0.7	0.6	0.5	0.5	0.5	0.4	0.5
Other	0.6	1.1	0.1	0.3	0.3	0.3	0.2	0.1
Total Preferred Stocks	9.7	10.3	9.4	10.3	10.2	9.6	9.3	9.1
COMMON STOCKS								
Utilities	2.2	2.6	2.7	3.2	2.8	2.8	2.8	2.8
Industrials	13.5	14.2	16.4	15.9	16.4	16.7	16.8	16.6
Rails	2.0	1.8	1.6	2.8	1.2	1.1	1.0	0.9
Bank, Insurance and Other	4.3	4.2	4.1	3.3	4.9	5.1	5.2	4.9
Total Common Stocks	22.0	22.8	24.8	25.2	25.3	25.7	25.8	25.2
MORTGAGES								
Real Estate	5.5	6.5	6.0	6.4	5.9	5.3	4.6	3.7
Invested in Institutional Property	17.6	17.4	16.5	16.2	16.9	15.6	13.7	12.5
Other	1.0	1.0	1.3	2.0	1.9	1.9	1.7	1.5
Total Investments	98.5	99.6	97.6	98.2	98.6	98.4	98.8	99.0
Uninvested Cash	1.5	0.4	2.4	1.8	1.4	1.6	1.2	1.0
Total Investment Assets	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average Rate of Income Earned	4.36	4.16	4.15	4.16	4.28	4.06	3.81	3.64

staggering public debt facing the country in the next generation, no practical mind would seriously suggest such a solution.

• **CHURCH RELATED INSTITUTIONS.** Of the 1700 institutions of higher education in the United States, 33 per cent are under state or city government control; 27 per cent, under private control. The remaining 40 per cent are under control of religious denominations: 12 per cent Catholic, 28 per cent other denominations.

Many of the so-called "big name" colleges and universities in this country were started under church auspices. After withdrawing from church control they attracted rich benefactors and were able to develop their plants and faculties. The president of a well known eastern college related to the Presbyterian Church recently deplored the withdrawal by the majority of the Protestant denominations from the colleges and attributed it to the fact that this nation in the last half century has gradually sold out politically to sheer expediency.

It is unfortunate that these denominations have largely disregarded higher education as one of their responsibilities, because many people still believe that religious instruction and influence have an important place in the formation of character during college days. Reports testify to the niggardly sums allocated to some church-related colleges by Protestant church organizations and the lack of support by the laity in sending their children to such institutions.

The Catholic Church has been an exception in providing colleges for both men and women under religious administration. Less than half the Catholic boys and girls of college age attend these institutions. They are not supported directly by the church, with one or two exceptions, but by the Catholic families who attend them.

Few Catholic colleges have any large endowment to speak of with the exception of the free services of members of religious orders. The same is true of most colleges related to Protestant denominations. As a group, the church-related colleges are doing a re-

markable job in character building. They are woefully weak, however, in the art of obtaining funds even for their most obvious needs.

• **STUDENT FEES.** It is possible to defend the proposition that student fees are not an essentially desirable source of income for the support of higher education and that eventually the greater part of financial support must come from public funds. At present administrators of publicly supported institutions who are struggling with the legislators and budget directors feel sorry for themselves and envy the private college its freedom. On the other hand, the privately administered college views with alarm the falling off of gifts and the comparatively low rate of endowment income and feels envious of its publicly supported neighbor.

Funds are necessary and they must come from some source. The record shows that they have been increasing gradually in the form of fees over a long period of years. Fees, however, can never be a substantial and dependable source of revenue.

• **COMBINATION OF PUBLIC AND PRIVATE SUPPORT.** A combination of both private and public support may be a partial solution of this difficult problem, especially if colleges keep seeking better ways and means of obtaining more independent use of their funds. Too often private gifts are controlled by the "dead hand" in a bequest. This is being overcome by appropriate literature of an educational character bringing forcefully to the attention of benefactors the specific needs of institutions.

Public funds are often wasted because of excessive bureaucratic control. Burdensome restrictions and requirements intended to enforce control often take away from legitimately appointed and responsible administrators their rights and prerogatives. It frequently happens that where responsibility is usurped by a public official the desired purpose of unnecessary spending has the opposite result. Many colleges and universities have competent officers who are prevented from functioning efficiently by unnecessary state and local red tape. Much valuable time of these officers, which should be devoted to educational matters, has to be devoted to dealing with government officials over trivial matters. This is all a part of the system

under which these institutions receive support. Continuous efforts should be made to obtain greater freedom from too strict control by government.

At the same time a more intensive internal study should be undertaken to put the departmental house in order. The work should be subject to criticism and appraisal by either internal or external educational committees and independent appraisers who are fully qualified in educational requirements. There is an obligation on the part of government to furnish means for the improvements recommended as well as an obligation on the part of college trustees to inaugurate them.

• **FEDERAL SUPPORT.** It is the obvious hope of all college and university administrators that federal support, when it comes in abundance, may reach the colleges through a remote control primarily designed to eliminate federal dictation. It seems clear, however, that it is going to be difficult to change the time honored axiom that he who pays the piper calls the tune. The rules will not be changed unless something is done about it before the legislation is passed. Let us be more specific and consider what is happening under the G.I. Bill of Rights.

The grateful people of the United States decided that they could find no finer way to reward the members of the armed forces than to supply them with educational benefits. An education which will broaden their outlook on life, make them effective leaders and at the same time increase their earning capacities is a gift without price. No unfortunate circumstance can rob them of it later in life.

The Congress with good intentions wanted to simplify the procedures for administering this gift. It said: We will allow every man and woman up to \$500 a year for tuition, books and supplies and we will give them board and lodging. That seemed like an extremely simple formula. But what happened? The colleges could not agree in advance on what they wanted.

The Veterans Administration has to prepare rules and directives which enable it to administer the program within the strict interpretation of the law. Naturally this makes such a program extremely complicated.

The mounting paper work requires a college to appoint a new clerk for every 50 or 60 veterans. More frequent and more complicated academic reports are imperative. A new coun-

selor is required for at least every hundred veterans. Teaching problems grow in complexity every hour. The detail required to operate the plan is staggering.

What started out to be, and was intended as, a simple veterans' program has taken precisely the opposite turn. It illustrates remarkably well what may be expected whenever the federal government decides to launch out with a broad educational program on a national scale. It seems like asking for Utopia to get the various interests involved to agree upon a few simple principles of financial administration and to have educators make their voices heard in the proper places.

The outlook for obtaining government money without control and without the bothersome and expensive process of bureaucratic administration is not promising. What the colleges and universities need to do is to pool their research resources for the purposes of discovering the atomic secret that will furnish them legitimate needs without sacrificing independence.

The financial pattern that is ultimately established for federal support of elementary and secondary schools may have a significant bearing on what is achieved for higher education in the future. The trend toward federal support of higher education is increasing, and the benefits acquired by veterans may well be extended to all citizens capable of absorbing a college education. It is important, therefore, to the trustees of higher education that the principles followed in the extension of federal aid to elementary and secondary education be sound.

As these words are written, another bill is before the Senate offering federal aid to the public schools only. In this form the legislation is discriminatory against private schools. The members of the Senate and House should be as fair-minded and American as the authors of the G.I. Bill of Rights who applied its benefits to all without any restrictions whatsoever so long as the institution is approved by the highest educational authority of the state. If federal aid is extended to college students in the future, but only to those attending public schools, 40 per cent of the pupils will be deprived of benefits. Therefore, all parents, Protestant, Catholic, Jewish, rich and poor and others who are interested in private schools, have a profound concern in this type of legislation.

Arboretum

SOME TWENTY-SEVEN YEARS AGO, THE city of Madison, Wis., employed John Nolen, landscape architect of Boston, to make a survey preliminary to the development of a model city plan. In the published report, Mr. Nolen made the following statement:

"The University of Wisconsin is not an isolated and detached institution of higher learning; it is the crowning feature of a statewide system of popular education. Moreover, its services do not terminate in the preparation of young men and women; it has vital relations with state government, with every city in the commonwealth and with the entire adult population.

"The most serious lack is that of garden and landscape features. A university, especially a state university, devoted largely to horticultural and agricultural interests, should naturally recognize the scientific, practical and esthetic value of the beautiful open air laboratories that have proved so useful in other places. The University of Wisconsin should have a first-class botanical garden of at least 20 acres, a water garden and aquarium; a good sized arboretum, say 200 acres, a university forest of 1000 to 2000 acres, and a university pleasure garden as large, for example, as that of Worcester College, Oxford."

Mr. Nolen suggested that from 500 to 1000 acres should be acquired by the city on Lake Wingra and his suggestion has become a reality as has the acquisition of land adjoining the university along Lake Mendota. Although it has been acquired primarily by the university, the city has a large park and zoo adjoining the arboretum.

There is considerable discussion as to what an arboretum is. Webster defines it as "a place in which a collection of rare trees and shrubs is cultivated for scientific or educational purposes." Someone else has said that an arboretum is "a library of trees, a museum of living trees and shrubs."

There appears to be no limit to the scope of activities that may legitimately be carried on in an arboretum. Accordingly, members of the University of Wisconsin committee have approached the task of developing the



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arboretum with open minds and a willingness to let the future determine what the extent of its undertaking shall be. Because the project is officially both an arboretum and wild life refuge, a balance must be maintained in developing the two major phases of plant and animal life.

The arboretum and wild life refuge has been established at Wisconsin for the following purposes:

1. To restore at a point near the university types of primitive Wisconsin landscape, their flora and fauna.
2. To provide for the study of plants and animals as individuals and as groups; their ecological relationships as well as their systematic classification, and, incidentally, economic and landscape possibilities.

The only recreational uses to be served by the arboretum are those which enable people to come into intimate contact with the out of doors. The use of the area as a picnic ground and for organized play would defeat the primary purpose of the arboretum and, therefore, is discouraged; the adjoining city park furnishes facilities for these activities.

The following points are significant in the development of the plan. In the division of the present owned lands, woodlands, marshes and prairie areas essential to the primary purposes of the arboretum were designated first.

Additional areas have been set aside for the exhibition of important North American plant associations typical of other regions and for a display area on which to study adaptability traits of introduced plants, which may become valuable additions to the introduced flora of the state. Such areas are to be completely buffered and separated from the indigenous plantings.

In the development of the area, drives are limited. Only circulation and parking areas necessary for the care and study of the area will be provided. Access is to be chiefly by trails and paths, as automobile traffic would defeat many of the purposes for which the arboretum was established.

The arboretum and refuge comprises about 1200 acres and borders almost the entire shore of Lake Wingra, a beautiful, clear, spring fed lake. The area is just at the outskirts of Madison, within sight and walking distance of the university and state capitol, and has wonderful possibilities for study and research. It is already being used as an outdoor laboratory by students of botany, engineering, entomology, landscape design, soils, zoology, game management and other courses.

Surveys of the plants found in the area are being made by botany students; soil surveys, by soils students; a topographic map has been made of the area by engineering students.

The arboretum is also a source of good practical design and construction problems for students in landscape design and an ideal place for the study of birds and other wild life.

The nature of the area is such that a wide variety of material can be grown. The terrain varies from large sized hills to open prairies, marsh, stream margin and lake shore. There are numerous exposures and a variety of soils. Many of the springs which feed Lake Wingra are on arboretum property. These springs, the creeks from them and the lake give ample opportunity for water gardens, the study of water plants, water birds, water insects and fish.

The entire arboretum and refuge is to be kept as natural as possible. Natu-

ral surfaces are being left undisturbed except in places where it is absolutely necessary to change them for service or safety.

A number of Wisconsin plant associations are contemplated. There are already more than 100 acres of oak woodland in the area but as this woodland was used for cattle grazing at one time it was necessary to replant portions of it with flowers, shrubs and some of the trees formerly found in association with oak.

To the casual observer this may seem quite simple, just a matter of collecting plants and planting them; but if it is to be properly done, considerable research is necessary. Soil, light and moisture relationships have to be carefully observed and anticipated.

Eight years ago, 15,000 white pine, red pine and white spruce were planted as a start toward the white pine, red pine and white spruce association. These plantings have made a good showing in spite of dry years.

In the fall and winter of 1934, a bog pool was constructed with C.W.A. labor and during that winter several hundred tamarack trees were planted as a start toward a tamarack association. In time, along with the tamarack, will be the pitcher plant, cotton grass, showy orchids and other plants of that habitat.

Southeast of the bog pool is a sandy hill. Here, eventually, will be jack pine with other plants naturally found with it. To the north of the tamaracks, on a little higher ground, blending with them is the arborvitae association where 400 American arborvitae were

planted. To the east of the oak woods along the creek in the shade will be the hemlock with its associates.

Plans have been drawn for plantings on the area, and since Jan. 1, 1936, more than 10,000 trees and shrubs and many thousands of prairie plants have been set out.

The research director of the area has outlined a complete wild life plan, including food plots at a number of locations. He has conducted a series of experiments on bird foods and on problems connected with small mammals.

With the help of a former director of the Wisconsin Historical Museum, the history and Indian legends of the arboretum were collected. In the early days Lake Wingra and its shores were a veritable paradise for all kinds of feathered game. The fishing was excellent. There are good possibilities of restoring this area to a portion of its former plenty.

Michael Olbrich, a former regent for whom a memorial entrance has been built, was the one person, if one man can be named, who has made the university arboretum and wild life refuge possible. He could see the practical as well as the esthetic value of such an undertaking.

At the outset it was supposed that the project would be limited to a few hundred acres. With the rapid acquisition of land and a keener appreciation of what can be accomplished, the vision has broadened appreciably. Development drawings have been made for an ultimate of 2000 acres. This is entirely within the realm of possibility during the next fifteen or twenty years.

The acquisition of land has been an arduous task but, by means of gifts from individuals and governmental units, the land has been acquired or optioned at no cost to the state. All development work has been done at practically no cost to the state, except the time of administrative officers and committee members. It is estimated that the value of this work to date is about \$1,000,000.

The arboretum is administered by an executive committee, consisting of the heads of the zoology, botany and game management departments, the secretary of the board of regents, the executive director of the arboretum, a citizen member and the superintendent of buildings and grounds.

Active administrators are the research director, who is chairman of the department of game management; the executive director, who is professor of landscape design and gardener in the department of buildings and grounds, and the superintendent of buildings and grounds. In addition to these individuals, there is a large advisory committee composed of conservationists, state and federal commission members, foresters and others.

As a consequence of this setup, we have or have had the following state or federal agencies cooperating with the university departments: conservation and highway commissions, National Park Service, Resettlement Administration, Geological Survey, U. S. Forest Products Laboratory, Wisconsin Historical Society, Wisconsin Archaeological Society, Biological Survey, fisheries and agricultural departments, Dane County and the city of Madison.





The RIGHT TO HIGHER EDUCATION

M. M. CHAMBERS
American Council on Education

PROGRESSING FROM THE OLDER CONCEPT of a rare privilege which may be restricted arbitrarily, college attendance gradually assumes the status of an inherent right belonging to all qualified persons. Recent court decisions have dealt with (1) discrimination on account of race, color or religion and (2) expulsion for misconduct.

An unsuccessful approach to the problem of alleged discrimination in admissions to privately controlled institutions of higher education was recently made in New York on the basis of a section of the tax exemption statute, dating from 1935, which stipulates: "No educational corporation or association that holds itself out to the public to be nonsectarian and exempt from taxation pursuant to the provisions of this section shall deny the use of its facilities to any person otherwise qualified, by reason of his race, color or religion."

TAX EXEMPTION QUESTIONED

An application was brought to cancel the tax exemption of Columbia University for the year 1945-46 on the ground that the tax commissioner made no inquiry or finding as to whether the university complies with the statute just quoted. The exemption covers real property having an assessed value in excess of \$58,000,000 on which the taxes would be about \$1,750,000 annually.

Construing the statute, the court held that it does not make compliance a condition precedent to exemption, but that it confers upon qualified individuals a right to be not barred from the use of the facilities on account of race or religion. The plaintiff in this case did not claim to be such an individual and did not allege positively any denial of facilities. Therefore his application to cancel the tax exemption was dismissed.¹

¹Goldstein v. Mills et al. (Trustees of Columbia University in the City of New York, Intervener), 57 N. Y. S. 2d 810 (1945).

A qualified Negro girl who was refused admission to the training class for prospective professional employees of the Enoch Pratt Free Library in Baltimore sought to establish her right to have her application considered without discrimination as to race or color. The federal district court dismissed her suit, but the Circuit Court of Appeals reversed and remanded the judgment, saying: "The plaintiff has been denied a right to which she was entitled."²

The library was founded in 1882 by Enoch Pratt, who erected and furnished a central building at a cost of \$225,000 and provided a fund of \$833,000, giving both to the city on condition that the city would contribute annually \$50,000 for maintenance, including the erection and maintenance of four branches, and that a board of trustees named by him would be incorporated with power to choose its own successors and to manage the library and make an annual report to the city. Acceptance was effected by a city ordinance authorized by an act of the state legislature.

In 1920 Andrew Carnegie gave the city \$500,000 for the erection of 20 additional branches, on condition that the city provide the sites and contribute annually at least 10 per cent of the cost of the buildings for their maintenance. In 1927 a state-authorized city bond issue of \$3,000,000 provided additional land and a new building for the central library. The city has greatly exceeded the annual support required as conditions of the Pratt and Carnegie gifts (\$100,000) and the total of its appropriations to the library in 1944 was more than \$850,000. In 1939 the library employees were covered into the city employees' retirement system.

²Kerr et al. v. Enoch Pratt Free Library of Baltimore City et al. (U. S. C. C. A.), 149 F. 2d 212 (1945); reversing (U. S. D. C.), 54 F. Supp. 514 (1944). Certiorari denied, 66 S. Ct. 26, 90 L. Ed. 36 (1945).

Since 1928 the library has maintained the training class for prospective library assistants. Each class is limited to 15 or 20 persons who are allowed to take a competitive entrance examination after being selected on the basis of "initiative, personality, enthusiasm and serious purpose." Members of the class are paid \$50 a month during training and are expected to serve as library assistants at least one year after graduation if a position is offered.

During the existence of the school more than 200 applications had been received from Negroes. All had been rejected. The board of trustees of the library resolved in 1942: "It is unnecessary and unpracticable to admit colored persons to the training class. . . . The trustees being advised that there are colored persons now available with adequate training . . . have given the librarian authority to employ such personnel where vacancies occur in a branch or branches with an established record of preponderant colored use."

14TH AMENDMENT INVOLVED

The plaintiff in this case, a 27 year old, well educated Negro girl, alleged violation of the Fourteenth Amendment to the Constitution of the United States and asked damages under the federal Civil Rights Act, an injunction against further refusal of her application and a declaratory judgment to establish her right to have it considered without discrimination based on race and color. She was joined by her father, suing as a taxpayer, asking that, if the library is a private body not bound by constitutional restraints on state action, then the city be enjoined from contributing to it, on the ground that such use of tax funds is *ultra vires*, and violative of the Fourteenth Amendment as a taking of his property without due process of law.

Circuit Judge Morris A. Soper observed that "There can be no doubt that the applicant was excluded from the school because of her race." The

principal defense was that the library is a private corporation and does not perform any public function as a representative of the state. On this the court remarked: "It is our view that although Pratt furnished the inspiration and the funds initially, the authority of the state was invoked to create the institution and to vest the power of ownership in one instrumentality and the power of management in another, with the injunction upon the former to see to it that the latter faithfully performed its trust. We know of no reason why the state cannot create separate agencies to carry on its work in this manner, and when it does so, they become subject to the constitutional restraints imposed upon the state itself."

Continuing: "Even if we should lay aside the approval and authority given by the state to the library at its very beginning, we should find in the present relationship between them so great a degree of control over the activities and existence of the library on the part of the state that it would be unrealistic to speak of it as a corporation entirely devoid of governmental character. It would be conceded that if the state legislature should now set up and maintain a public library and should entrust its operation to a self perpetuating board of trustees and authorize it to exclude Negroes from its benefits, the act would be unconstitutional.

"How then can the well known policy of the library, so long continued and now formally expressed in the resolution of the board, be justified as solely the act of a private organization when the state, through the municipality, continues to supply it with the means of existence?"

The Supreme Court of the United States has refused to review this decision. Its practical significance may eventually be considerable, in view of the fact that it affords one instance of a private educational corporation being held to be subject to the restraints which the Fourteenth Amendment places upon the states and their instrumentalities.

Forfeiture of rights as a student by misconduct is always, of course, a possibility, for it is axiomatic that rights carry with them corresponding obligations. Two students in the Medical College of the University of Tennessee were expelled for selling final examination questions to other students. They sued to compel their reinstatement, alleging that they had

not been given a sufficient hearing and had been deprived of the right to make proper defense against false accusations. Specifically, they complained that they had not been given a chance to confront adverse witnesses and cross-examine them. These processes are not required in such a case, decided the Tennessee supreme court, in an opinion in which numerous similar cases in other states were carefully reviewed.

The testimony of the dean of the college and the president of the university was that the stealing and sale of examination questions were of "such momentous import to the good name of the school and of the medical profession generally that it warranted a searching investigation and disciplinary action to the end that the evil complained of be corrected." Accordingly the accused students were first called before a student council consisting of 12 students and the dean, where they denied the charges.

The student council, after hearing the evidence against them, recommended to the faculty that they be expelled. The dean then notified them to appear before a faculty committee on a specified day. One of them failed

to attend. The faculty committee expelled them. The one who had failed to attend demanded a rehearing. This was granted, and the charges and the testimony were read, and the student was heard in his own behalf. The president of the university was present. Later the president granted an appeal to a committee of the board of trustees of the university. On that occasion the students were present and represented by counsel and were permitted to testify and introduce witnesses in their own behalf. The committee affirmed their expulsion.

The foregoing procedure was sufficient, for in such cases it is not necessary that the hearing be conducted in strict accordance with all the formalities of a proceeding in a court of law. Conceding that the right to continue one's course in a medical school is a valuable property right, the court pointed out that it is forfeited unless exercised with due regard for the rights of the public.³ The U. S. Supreme Court refused to review the decision.

³State ex rel. Sherman v. Hyman et al.; State ex rel. Avakian v. Same, Tenn., 171 S. W. 2d 822 (1942). Certiorari denied, 319 U. S. 748, 63 S. Ct. 1158, 87 L. Ed. (1943).

SALARIES AND COST OF LIVING

THE AMERICAN COUNCIL ON EDUCATION recently conducted a sampling study of salary levels and cost of living trends in 70 institutions (27 private, 29 public and 14 junior colleges, both private and public).

The percentage of gross salary increase is as shown in table 1.

Student fees for instruction in liberal arts colleges have also increased, on the average, although 18 institutions reported no change. This trend becomes all the more significant when compared with the percentage of increase in living costs for both faculty and students as shown in table 2.

Table 1—Summary of Salary and Cost of Living Trends in 70 Colleges and Universities

1939-1940, 1943-1944, 1946-47

	Per Cent Increase 1943-44 From 1939-40				Per Cent Increase 1946-47 From 1939-40			
	Priv.	Pub.	Jr. Col.	Av.	Priv.	Pub.	Jr. Col.	Av.
Instructor	8.2	9.73	13.29	10.40	19.17	21.06	26.67	22.30
Assistant professor	3.92	9.05	*	6.48	15.24	20.50	*	17.87
Associate professor	2.91	8.31	*	5.61	14.88	18.45	*	16.66
Professor	4.31	7.72	*	6.01	15.33	17.64	*	16.48

*Almost every junior college listed changes for instructor only; therefore, only this type of faculty member was included in the junior college columns.

Table 2—Percentage of Increases in Cost of Living From 1939-40

	Priv.	Pub.	Jr. Col.	Av.
Faculty members	27.3	31.4	31.6	30.1
Dormitory students	16.2	22.3	24.5	21.0
Nondormitory students	21.3	27.88	31.6	26.9

ARE INDUSTRIES WILLING TO SUPPORT COLLEGE RESEARCH?

HORACE RENEGAR

Director of Public Relations
Tulane University

INDUSTRY AS A WHOLE, ACCORDING to the American College Publicity Association's survey on industrial research, is favorably inclined to closer cooperation with colleges on research problems. It is the thought of the vice president on research that colleges and universities interested in expanding their research programs in cooperation with industry can use the survey as a basis for contacting industrial groups within their own areas.

Since the survey included both large and small businesses, both diversified

RESULTS OF SURVEY BY COLLEGE PUBLICITY ASSOCIATION

I

Is your corporation expending money on research at any college or university at present?

No	150
Yes	76
Unanswered	14

If yes, do you designate the nature of research for which it is used or is that left to the educational institution to determine?

Designated	58
Not designated	10
Both	4
Unanswered	4

Do you require any concessions of priority or ownership on findings, discoveries or developments that may result from research sponsored under your grant?

Yes	49
No	22
Both	4
Unanswered	1

II

Does your corporation maintain a private laboratory for research?

Yes	148
No	63
Unanswered	29

If yes, would or might it be practicable to transfer all or part of the research conducted in your laboratories to a college or university if the latter could provide the scientific personnel and facilities to conduct your program adequately?

Part	80
None	65
All	2
Unanswered	1

III

Do you prefer a particular classification of educational institutions for the carrying on of research for industry, i.e. privately endowed, state, municipal or church institutions?

No choice	131
Unanswered	93
Endowed	37
State	17
Church	5
Municipal	3

Would you have any preference as to geographical location of educational institutions conducting your research program, all other things being relatively equal?

Yes	137
Unanswered	57
No	46
(Nearly all preferred a nearby location.)	

IV

In your return to peacetime production, are you planning to devote any new or additional funds to research?

Yes	143
No	63
Unanswered	34

If yes, are you or will you probably be interested in negotiating with or considering an acceptably prepared college or university to undertake your project or part of it?

Unanswered	101
Yes	72
No	67

Do you envision a permanent research program or a short term research project?

Permanent	123
Unanswered	91

Permanent or Short Term, Cont.

Short term	21
Both	5

V

Are you interested in cooperative research in your particular field of industry?

No	107
Yes	94
Unanswered	39

If yes, would you be interested in regional or larger cooperative research projects in your field being done at a college or university?

Unanswered	152
Yes	63
No	25

VI

Do you at present have any college or university faculty members acting as research consultants for your own corporation?

No	140
Yes	65
Unanswered	35

VII

If you agree with the premise that educational institutions must keep sufficient emphasis on basic exploratory research as opposed to applied research, does your corporation plan, or might it be interested in planning, to dedicate some part of its earnings to endowments for fundamental research in colleges and universities interested in maintaining an active research program?

No	97
Unanswered	79
Yes	64

and highly specialized, the totals reflect not only the attitudes of businesses toward financial support of research in colleges but also their financial ability to contribute to research programs and the degree to which they expect to benefit by them.

No breakdown on individual company replies was made because many requested that their names not be used.

Most of the larger corporations able to contribute to college research expressed willingness to contribute further or at least to maintain present contributions. Many of the smaller companies expressed great concern over the problem of financial support for colleges, believing that it should come from industry rather than government even though as individual companies they are not able to make such contributions.

The survey included also many small companies so highly specialized that their research, if any, would be on problems of design and production unsuitable for college laboratories. Many companies commented that their contributions to college research would depend largely upon modification of present tax laws.

A large number of companies think that colleges should emphasize fundamental research as opposed to industrial research, feeling that the latter could be more speedily and efficiently handled in company laboratories. One manufacturer, however, proposed that state universities set up industrial research centers for state industries to which those industries might contribute; many manufacturers expressed interest in arrangements whereby colleges might handle specific research problems.

A large number of companies indicated that although they did not contribute directly to college research, they contributed to trade associations which did. The survey did not include trade associations.

At least one company, the Chrysler Corporation, maintains its own school and awards engineering degrees.

The survey questions are restated in the accompanying tabulation which gives a summary of the replies. The following explanation preceded question No. 7: "An important aspect of this whole subject is whether research in educational institutions shall be supported from private or public funds. Personal wealth, heretofore a major source of grants and endowments in educational institutions, has

diminished so greatly as a result of federal taxation that if fundamental research in educational institutions is to continue, it must receive support from other sources, such as industrial and business corporations. If it does not, its only other source of support is from governmental agencies."

It was stated further that most authorities are agreed that educational institutions must keep sufficient emphasis on basic exploratory research as opposed to applied research.

The number of industries replying to the American College Publicity Association's questionnaire was 240.

LET'S REVISE OUR IDEAS on COMPUTING COSTS

GEORGE E. VAN DYKE

Treasurer, Syracuse University

SEVERAL YEARS AGO THE SUBJECT of unit costs in colleges and universities received a great amount of attention from business officers. Many of us were finding difficulties in keeping our current operations in the black. Decreased earnings from investments were causing us concern; smaller student bodies were bringing in fewer dollars of income from tuition and fees, and some of us were finding difficulty in obtaining support from alumni and friends.

In an attempt to bring the operations of our institutions into the black, we began to examine our operations. After all possibilities of increasing revenue seemed exhausted, we tried to find ways of reducing expenses, and one of the approaches to the problem was through the computation of unit costs.

It was soon found, however, that the computation of unit costs was an involved and difficult task, even more so than the computation of unit or standard costs in industry. The subject became so important that finally the National Committee on Standard Reports for Institutions of Higher Education, after a great deal of study and thought, developed a standard technic or procedure for computing unit costs.

With the development of this standard procedure, more institutions made cost studies, and the result of the cost computations became more significant and meaningful. Unit costs were computed for the purpose of (1) develop-

ing better budgets and budgeting procedures within our institutions, (2) trying to find wastes in expenditures and eliminating them, (3) comparing ourselves with other institutions. If we found our costs were lower than those of other institutions we frequently publicized this fact and used it as an argument for greater support from state legislatures and other bodies.

It was not long, however, before we began to run into pitfalls and difficulties in the use of unit cost data. For example, we learned that the average salary level of our instructional staff, the class size or ratio of instructional faculty to student body and other similar factors were the important causes of high or low unit costs. We saw that these factors could be controlled and adjusted and costs reduced without the necessity of completing all the details of unit cost computations.

We found also that in the preparation of the budget the information made available through unit cost computations was not always as valuable as we had hoped. We did not close the college of medicine, for example, because the unit cost of instruction in that division was two or three times the cost of instruction in liberal arts. We did not close the college of engineering because unit costs there were higher than in some other divisions.

I doubt that any college of liberal arts within a university was deliberately expanded at the expense of other colleges simply because the unit cost

in instruction was lower, and certainly no college or university closed its junior and senior years and its graduate studies because the unit costs at those levels were higher than at the lower levels.

Unit costs in themselves were not of primary significance in the financial reorganization and administration of colleges and universities, we found, although much of the information disclosed by these studies was of value.

Another factor which caused serious criticism of unit cost computations was the inability to determine the unit of finished product. We cannot always know when we have produced an educated man. Those of us who supported unit cost computations tried to answer this criticism by saying that we were not attempting to determine the cost of educating an individual but were determining only the cost of providing the educational facilities for students.

Interest in unit cost studies declined for several years. With the development of the college training programs for the army, navy and other branches of the service, college and university business officers suddenly were faced with contracts, agreements and programs which were based on items of cost.

You all remember the terms "Cost of Mess per Man per Day" and "Cost of Maintenance and Operation of Plant per Square Foot Area or Cubic Foot Volume." How many of us at that time knew what these costs were for our institutions during ordinary operations? Most of the unit cost studies up to that time dealt only with the cost of instruction. Of course, there were exceptions, for a few institutions maintained detailed statistical studies which produced this information; but most of us had no good idea of what it was costing us to feed a student in our dining halls for a year, month or

a week to say nothing of the per diem cost.

Only a few of us had any idea how much it was costing us to operate the dormitories for our students on a unit basis or to provide the custodial and janitorial services for our educational buildings on a per square foot or a per cubic foot basis.

After these harrowing experiences with the army contracts and negotiating officers, how many of us now feel that year by year we ought to compute such costs and have them as a matter of record and as a guide for our financial operations? Perhaps some of us will want to carry on such studies and others will feel about them pretty much as we felt about the instructional cost studies of former years.

It seems to me, however, that colleges and universities are facing a somewhat different problem at the present time, a problem that will last for from two to perhaps ten years, that problem being the great influx of students. At the present time the story in practically all colleges and universities throughout the land is the same: "We have no room for more students."

We are being asked by our presidents and board members, "How many more students can we accept without being forced to go to the expense of constructing new living quarters, dining halls, classroom and laboratory buildings and office buildings?"

We are being asked, "If we accept 100, 500 or 1000 more students, what will be the additional expense in plant, staff and faculty, and can we operate in the black with this additional load?"

Are we not now facing the need of determining a new basis and perhaps a new technic for computing cost figures? Instead of confining these computations to instructional costs, should they not be expanded to cover the costs

of the noninstructional functions essential to the operation of a college? Perhaps the costs should be expanded to include the cost of feeding students in our dining halls, the cost of operating dormitories, the cost of operation and maintenance of our educational plant and, more especially, the cost of expanding our physical plant, faculty and staff to accommodate larger numbers of students.

Perhaps the unit of cost computations should be changed and costs for groups of students in units of 100, 500 or 1000 should be substituted for costs per student or per student credit hour. Assuming that an institution decides to expand its plant to provide for increased enrollment, would it not be better to compute the cost of operation and maintenance of each building and compare the additional expense for new buildings with the additional revenues to be received from student fees, from legislative appropriations or from prospective donors?

No special brief is held in this discussion for or against the computation of unit costs. There undoubtedly is value in cost studies even on the old basis of cost per student or per student-credit-hour for instructional purposes, but there seems to be a need for revising our ideas on the purposes of cost studies, the technics of cost computations, the functions that might be evaluated on the basis of cost computations and especially the use of unit cost data.

Even in the development of new ideas in cost computations we undoubtedly shall find that the information disclosed by these studies must be interpreted and evaluated in connection with a large number of other statistical facts and items of information before it can be used as a point of departure in administrative policies and procedures.

How's Your Budget?

Planning a university budget is a perennial headache for every college administrator. In the September issue James B. Trousdale of Cornell University suggests ways of negotiating this hurdle with a minimum of confusion.

CHECK LIST of DISHWASHING OPERATIONS

DISHWASHING MACHINE

- Cleanliness inside and outside
- Spray openings washed and pipes cleared
- Openings rinsed clean
- Hose for daily cleaning of tables and machine
- Machine in good working order

SOILED DISH TABLE

- Drain to prevent liquids and food from getting into machine
- Scrapping arrangements provided
- No soil that will mark dishes

UNLOADING FACILITIES

- Container for depositing silverware
- Spot for placing and draining soiled cups
- Place for piling trays
- Arrangements for racking or stacking plates

CLEAN DISH TABLE

- Table large enough to allow one minute for dishes to drain and air-dry
- Shelves on which to place containers for clean cups
- Shelves for convenient stacking of plates and other tableware, saving floor space
- Sink for soaking dishes with "baked-on" food
- Arrangements for eliminating need for lifting of heavy loads
- Slide for returning empty racks to loading zone
- Rack storage: ample supply of good racks

CLEAN DISH STORAGE

- Storage space enclosed to prevent contamination by air-borne bacteria
- Plate warmer shelves of wood or stainless metal to eliminate possibility of marking dishes

DISH PANTRY

- Good lighting for good inspection
- Acoustic treatment of room and tables
- Good ventilation for quick air-drying of dishes and pleasant working conditions
- Ample hot water supply delivered to machine at temperature of 170° or above for required bacteria reduction and quick air-drying of dishes
- Booster heater for raising temperature of hot water taken from building supply to 170° or above for good rinsing of dishes in the machine

ORGANIZING THE HELP

- Recognition of foreman of dishwashing department by other department heads and kitchen personnel
- Appreciation by foreman of his responsibility for:
 - a. Production of clean dishes, including regular inspection and periodic removal of stains
 - b. Control of breakage, including regular reports
 - c. Daily cleaning of the dishwasher, dish tables and floor
 - d. Training of personnel for this department

- Regular inspection of all tableware, including checking and rejection of any that is not fit for further use and dipping or scrubbing those pieces that show accumulation of stains
- Employment of good help; personnel measuring up to standards required for other departments
- Recognition of importance of clean dishes and the fact that dishwashing can be pleasant work

OPERATION OF DISHWASHING EQUIPMENT

- Operating instruction supplied by manufacturer mounted on wall or available for reference
- Daily cleaning of machine, including cleaning of wash pipes and rinse sprayers
- Scrapping of dishes so that left-over food and liquids are kept out of machine
- Racking dishes for good washing: plates on end; cups and bowls upside down in open racks; light loading of silverware
- Strainer pans (and pump intake strainers if used) kept in place
- Good detergent with dispenser properly used or other provision for maintaining strength of washing solution without wasting compound
- Washing and rinsing as specified by manufacturer
- Rinse system: daily inspection and removal of pipe scale as required; use of line strainer
- Dishes washed while fresh or soaked if they have been allowed to stand for some time
- Chinaware allowed to drain and air-dry; silverware and glassware towed while piping hot
- Rigid inspection; rewashing of any pieces that are not perfectly clean
- Dishes handled to preserve cleanliness: clean hands touching only handles of cups and silverware, rims of plates and bottoms of glasses
- Careful handling, transporting and storage of clean tableware
- Time and motion study: operators working on basis resulting in high production with minimum effort; opportunities for reducing waste effort

MAINTENANCE OF EQUIPMENT

- Responsibility delegated to a competent mechanic; either an employee or an outside service
- Regular lubrication of motor and all parts as specified in manufacturer's instructions
- Operation of parts checked as suggested by maker
- Periodic cleaning and removal of alkali deposits
- Adjustment of gas burners for good combustion; checking of pilot light and thermostats
- Pump packing: tight enough to stop excessive leaking but not tight enough to overload motor
- Valves: tightening packing around valve stems; replacing disks and/or reseating where valves leak and waste water; tightening valve handles
- Electric parts: protected against damage by water; motor commutator cleaned; switch in good working order

Prepared by six manufacturers of dishwashing equipment who are sponsor members of the National Sanitation Foundation.

PROLONGING LIFE OF FOOD SERVICE EQUIPMENT

HARRY C. EVERING

Dining Service Department Manager
Houston Hall
University of Pennsylvania

THE LIFE OF FOOD SERVICE EQUIPMENT depends partly on the quality purchased, partly on the amount of use the equipment receives, but mostly on the care exercised in using and maintaining the equipment.

When a new item of mechanical equipment is purchased, thought should be given to its location in the kitchen. It should be spaced properly for ease in cleaning and should not be placed where trucks or bus wagons are likely to strike it.

INSTRUCTIONS TO EMPLOYES

Employes who are to operate the new machine should be instructed and any charts or instructions pertaining to the operation of the machine should be posted nearby. Machines for food preparation are usually of substantial construction and most failures and breakdowns are caused by careless and abusive handling by employes.

Thorough and regular cleaning and systematic lubrication are absolute necessities if long life of equipment is to be expected. I have seen dishwashing equipment in service for twenty-five years and still in perfect mechanical condition. In Houston Hall, at the University of Pennsylvania, we recently replaced a potato paring machine that was 30 years old and still in working condition. It was replaced with a larger machine.

Mechanical refrigeration is a necessity in the modern kitchen. This includes walk-in boxes of various temperatures, freezing unit, salad refrigerator, ice cream cabinet, refrigerated sandwich unit, soda fountain and similar equipment. Refrigerators should be opened as infrequently as possible and employes should be instructed to close the doors on walk-in boxes when working in them. Keeping doors open for long periods causes the refrigerating coils to become coated with ice, which impairs refrigerating efficiency and places an abnormally heavy load on the compressor. Refrigerators that are not constructed to defrost on a regular cycle should be defrosted manually about once each week.

Interiors of refrigerators should be cleaned regularly, compressors lubri-

cated and cleaned and condensers brushed frequently. Heavy dirt formation should never be permitted to accumulate on air cooled condensers as this causes the compressor to run excessively and will, of course, shorten the life of the refrigerating unit. Door gaskets should be replaced when necessary so that an airtight seal is assured.

Probably no other items of equipment in a kitchen are more important than the ranges, ovens, broilers, fryers and griddles. The fuel most commonly used in our section of the country is manufactured gas. Gas fired cooking equipment can be used for many years provided it is given the proper care and attention. Accumulations of grease and dirt cause excessive fuel consumption, corrosion and uneven performance. Excessive gas flow to burners will shorten the life of the equipment, raise the gas bill and lower efficiency.

Closed top ranges should be rubbed with heavy burlap each day. Water should never be used on closed top ranges. Occasionally the tops should be removed and carbon deposits brushed from the burner chamber.

Open top ranges should be scraped each day, then washed with a good grease solvent. Burners may be soaked or boiled in a solution of sal soda or some good commercial cleanser.

It is well to open an oven door before lighting the oven and to leave the door open until the oven begins to heat. The purpose of this is twofold. It will prevent the formation of condensation which rusts oven bottoms. Also there is the possibility of the oven being filled with gas resulting from a faulty burner cock. Opening the door before lighting minimizes the possibility of explosion. All trace of spills and boilovers should be removed from ovens before the material carbonizes.

Deep fat fryers should be boiled out weekly with a mild (not caustic) washing compound. A little vinegar added to the rinse water will neutralize any trace of alkalinity remaining from

the washing solution. Grease should be strained each time after use as an accumulation of crumbs in the bottom of the kettle will act as an insulation and will reduce considerably the efficiency of the fryer.

Care should be taken to prevent overheating the griddle. It is seldom necessary to have the burners turned on full once the griddle is hot. A metal scraper should be used to keep the griddle free of encrusted matter and a polishing stone should be used once each day.

DISHWASHING EQUIPMENT

Often the dishwashing department is given less attention than are other departments. Actually the dishwashing room should receive more attention as nothing can be more ruinous to a food service operation than unclean china, glassware or silverware. Frequently this condition is created by mechanical equipment being allowed to depreciate.

Peak efficiency in mechanical dishwashing and glasswashing can be obtained only by keeping the equipment in a perfect state of repair. Leaking valves must be replaced, pumps and motors properly lubricated, wash nozzles kept clean and clear of seeds, stones and other refuse. If the machine is constructed of stainless metal, it can be kept free of scale and scum by running it empty for one hour each week with a good dishwashing machine compound. If the tank is made of galvanized iron, it is best to scrub the machine manually.

Glasswashing machines and silver burnishing machines require little attention other than proper lubrication.

Employes should be taught to use mixing machines, food choppers, power meat saws and slicing machines with care. These machines save a great deal of work for kitchen employes and will last a long time if not abused. Under heavy load, mixing machines should be placed in low gear as running the machine in high gear while heavily loaded places unnecessary strain on the motor and bearings.

Mixing machine bowls and whips must not be dropped or hit on the

side of sink when they are being washed. After a bowl has been dented, the whip will strike the side and wear off the tin. Every precaution should be taken to have only trained and experienced personnel use these labor saving machines as they are too valuable to risk their being damaged.

Stainless metal sinks, counters and tables are considerably more expensive than those made of galvanized iron. In the long run, however, stainless metal will cost less as it outwears galvanized equipment many times over. In addition, it is much easier to clean and maintain and cannot be damaged easily. If galvanized equipment is used, precaution must be taken not to scratch the surface as this will cause the iron to rust through very quickly. Water dripping from leaking spigots will also wear through the galvanized coating on sinks and cause the iron to rust.

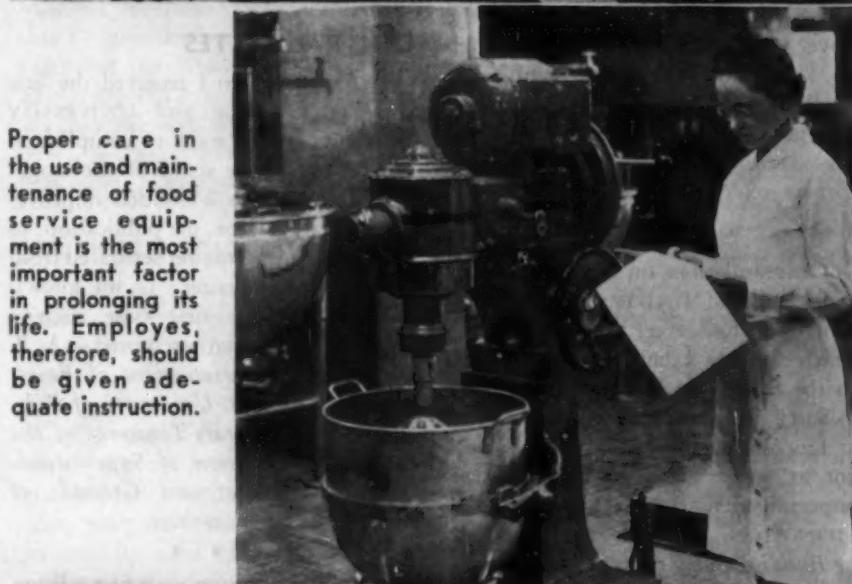
The soda fountain is usually one of the busiest spots in a college or university food service. Modern fountain units are well constructed and will give years of uninterrupted service if a few simple rules are followed regarding maintenance and cleaning. Each week the cooler box should be drained and cleaned, all slime and sediment being removed from cooling coils, sidewalls and bottom.

Ice cream cabinets should be defrosted by scraping them with a spatula or ice cream spade. Warm water should never be used in the ice cream cabinets as this is likely to break the seal in the compressor by expanding the refrigerant in the system. The dry cold storage compartment should be washed with soda and warm water.

Sirup jars should be drained and washed and the sirup jar enclosure cleaned with a towel dipped in warm soapy water. Sirup pumps are cleaned by pumping hot soapy water through them.

Each month the carbonator should be oiled and checked for leaks and approximately once a year the carbonator may be washed internally with a bicarbonate of soda solution.

There is no trick to prolonging the life of food service equipment, and, by the same token, there are no short cuts. Employes must be taught to handle equipment properly, some person must be made responsible for thorough and systematic lubrication, and, most important of all, a rigid schedule must be followed for regular cleaning of the various units.



Proper care in the use and maintenance of food service equipment is the most important factor in prolonging its life. Employes, therefore, should be given adequate instruction.

GREETINGS!

**Excerpts from some friendly letters of comment
regarding the first [July] issue of the magazine**

EASTERN STATES

Copy of the July number came today. You are certainly to be congratulated on its accomplishment, especially under the trying conditions. I like the type, I like the articles. Also it is grand to see a magazine that does not begin an article and refer to an endless number of other pages. I am not so sure I like the cover, but I am not expert enough to know what is wrong with it. I shall read it all and show it around and get comments.—J. HARVEY CAIN, *Accounting Officer, Board of Higher Education, New York City.*

x x x

Congratulations on the first issue of COLLEGE and UNIVERSITY BUSINESS which I find very interesting. So much so, that I have given my copy to the university business manager.

Sorry I did not see more of you at Lincoln, but hope you will be present at some future meeting of the Superintendents' Association.—C. A. LIVINGSTON, *General Superintendent of Buildings and Grounds, University of Rochester.*

x x x

I appreciated receiving the first copy of COLLEGE and UNIVERSITY BUSINESS which arrived this morning. While I have not had the opportunity to examine it carefully, I mean to do so at my leisure but the first look of the magazine, its makeup and contents is extremely favorable.

I wish you well in your venture and hope that it proves to be a successful one. It seemed to me that it fills a definite need in the college field and I am sure will be well received by college administrators throughout the country.—WILLIAM A. BODDEN, *Treasurer and Controller, Smith College.*

x x x

Excellent! Keep up this high standard.—H. M. B., *George School, Bucks County, Pennsylvania.*

I have read with great interest Volume 1, Number 1 of COLLEGE and UNIVERSITY BUSINESS. You have done a swell job. The several persons to whom I have shown the issue have expressed considerable interest in the form and contents thereof.—W. EMERSON GENTZLER, *Bursar, Columbia University.*

CENTRAL STATES

A few days ago I received the first copy of COLLEGE and UNIVERSITY BUSINESS, and I want to compliment you on the entire setup of the magazine. I think it is a decided improvement in this type of publication to have the reading matter separated from the advertising matter. To my knowledge this is the first time such a separation has been attempted.—A. F. GALLISTEL, *Superintendent of Buildings and Grounds, University of Wisconsin, and Secretary-Treasurer of the National Association of Superintendents of Buildings and Grounds of Colleges and Universities.*

x x x

Congratulations on your first edition and every wish for success.—JAMES J. RITTERSKAMP JR., *Purchasing Agent, Washington University, and President of the Educational Buyers Association.*

x x x

My sincere congratulations on Volume 1, Number 1 of the "cub." I received my copy last night and spent last evening going through it from cover to cover. I like the make-up and the contents. I think the idea of putting the advertisements in the back is splendid. Certainly it does not detract at all from their value because those of us who are actually interested in ads check through them carefully anyway and they do not interfere in any way with the articles....

Again I say congratulations on a mighty fine job. I am sure that this extremely worthwhile contribution to the field of college business management will be appreciated by every-

one in the business.—CHARLES W. HOFF, *Business Officer, University of Omaha.*

x x x

Congratulations on the excellence of the initial issue of COLLEGE and UNIVERSITY BUSINESS. The quality and variety of material in this first issue are evidence both of a broad understanding of the field of college business and of ability to treat competently of its problems. The magazine fills a very real and long-felt need. It deserves and I am confident it will receive the support of college business officers everywhere—C. D. SIMMONS, *President of Central Association of College and University Business Officers, and Comptroller, University of Texas.*

x x x

My congratulations to you and your associates on this fine result. It is superior in typography, legibility, readability and in general attractiveness. You and your associates have done a fine job. Best wishes for increasing influence and future good work.—LYMAN R. FLOOR, *Superintendent, Department of Buildings and Grounds, University of Chicago.*

x x x

I have just examined the first issue of COLLEGE and UNIVERSITY BUSINESS, I found it so absorbing that it was not easy to lay it down. The initial article is an excellent statement of the dilemma in which all of our institutions of higher learning find themselves in their honest desires to accommodate the maximum number of ex-service students.

If subsequent issues of your magazine maintain the high level of this first one, surely there will be little doubt about the service it will render to institutions like this.—LAURENCE M. GOULD, *President, Carleton College.*

x x x

Congratulations on your first issue. The general style and format are excellent. The cover has dignity, but

with strong eye appeal. The articles are excellent and well selected.

Best wishes for the future of COLLEGE and UNIVERSITY BUSINESS.—*T. E. BLACKWELL, Treasurer, Washington University, and Secretary-Treasurer of Central Association of College and University Business Officers.*

x x x

Please accept my thanks and expression of appreciation for the copy of your first issue of COLLEGE and UNIVERSITY BUSINESS.

I do want to congratulate you on the all around excellence of this first edition. Dave Ford's discussion of the comparative merits of "Cafeteria vs. Family Style" food service at Notre Dame was particularly interesting to me. I hope you will see fit to continue to place due editorial emphasis on this important phase of institutional business administration. . . . Best wishes for the success of your new enterprise.—*JAMES H. FELBER, Director, Coffman Union Food Service, University of Minnesota.*

x x x

Thank you for sending . . . a copy of the first issue of COLLEGE and UNIVERSITY BUSINESS. It represents a very good start and I have no doubt it will improve as time goes by. It should fill a real need in this field of educational administration where a very definite vacancy previously existed. Best wishes for the fullest possible success. — *LLOYD MOREY, Comptroller, University of Illinois.*

x x x

I want to congratulate you on having done a splendid job on this first issue and tell you that I have complete confidence that succeeding issues will be equally good and perhaps better if any improvement is possible. I like the arrangement and scope of the material, and I am delighted with the separation of editorial and advertising copy. Frankly the only criticism I have is the color of the cover page and that is such a minor matter that I should not even mention it. Since I am not artistically minded, I am probably dead wrong about the color scheme of the front cover, but I had hoped it would have a little more life.

I have not yet had time to read all the articles in the first issue, but those that I have read are instructive and of real interest. I consider it to be a privilege and an honor to be a member of the Editorial Board of COLLEGE

and UNIVERSITY BUSINESS, and I hope I can be of at least some small service in helping you with this very worthwhile undertaking.—*A. W. PETERSON, Director, Business and Finance, University of Wisconsin.*

x x x

I have just received my copy of the first run of COLLEGE and UNIVERSITY BUSINESS. I like the appearance of the journal and find the table of contents very interesting. I shall read this with more than usual care.

If you can keep up the standards and improve the quality, I am sure this venture will prove to be a definite success and a real contribution in our work.—*R. B. STEWART, Vice President and Controller, Purdue University.*

x x x

May I take this opportunity to say that I appreciated receiving a copy of COLLEGE and UNIVERSITY BUSINESS. The articles it contained were generally helpful and were read with interest.—*CARL STILWELL, Business Manager, Drury College.*

SOUTHERN STATES

I have examined with very great interest the first number of COLLEGE and UNIVERSITY BUSINESS. I am much impressed with the contents of this first number. The articles cover a wide range of subjects most of which are of immediate concern to administrative officers at the present time, and the discussions seem to be written by men of wide experience and understanding and consequently to be most practical and helpful.

I am sure that the magazine, if it maintains the high level of this first number, will be an exceedingly valuable publication. — *GOODRICH C. WHITE, President, Emory University.*

x x x

There has just come to me a copy of Vol. 1, No. 1, July 1946, of COLLEGE and UNIVERSITY BUSINESS, which I appreciate. . . . It seems to me that your publication will be quite valuable to administrative heads and business managers of institutions of higher education.—*CHARLES E. DIEHL, President, Southwestern at Memphis.*

x x x

Vol. 1, No. 1 of COLLEGE and UNIVERSITY BUSINESS arrived today. It contains the type of information we need and just when most needed. With so many problems connected

with student housing today we especially appreciate learning what others are doing. Keep sending the magazine and send the bill. No subscription rate* is given.—*MAYME WADDELL, Business Director of Residence Halls, West Virginia University.*

x x x

I thank you for sending me a numbered copy of the first issue. I shall take it home with me tonight to read it with interest.—*GERALD D. HENDERSON, Business Manager, Vanderbilt University.*

x x x

It appears to me that you have a very fine publication and I am taking the liberty of wishing you the greatest of success in this new undertaking.—*J. C. LITTLEJOHN, Business Manager, Clemson Agricultural College.*

WESTERN STATES

Let me congratulate you on the excellence of the first number of COLLEGE and UNIVERSITY BUSINESS. It is attractive in arrangement and format and competent in the coverage of the subjects. I shall look forward to future numbers with anticipation.—*LESLIE F. ROBBINS, Purchasing Agent, University of Colorado.*

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My copy of COLLEGE and UNIVERSITY BUSINESS arrived this morning. In every respect it is an outstanding product. No other book or magazine has ever arrived on my desk with so much helpful information between its covers for the person who is engaged in the business administration of a college.—*DARYL CHASE, Dean of Students, Utah State Agricultural College.*

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I have just had an opportunity to read the first issue of your publication. I should like to subscribe. In order to prepare the necessary forms so that it may be purchased through college funds, I will appreciate word from you as to the subscription price* at your earliest convenience. In the meantime, however, do not want to miss any issues so will appreciate your entering my subscription immediately.—*WENDELL R. HORSLEY, Agricultural and Mechanical College of Texas.*

*No subscriptions are being accepted at present. Circulation has been placed on a restricted basis until there is some improvement in the paper situation.—Ed.

QUESTIONS AND ANSWERS

Shall Students Pay in Advance?

Question: Should all tuition be collected in advance, regardless of the prospective student's financial status?—S.F.E., Ohio.

ANSWER: It is good training for a student to be required to handle his finances in a prompt and businesslike way. This part of his college education is no less important and is just as far-reaching as are the purely academic requirements. It is my opinion, therefore, that a student should pay his fees in accordance with schedules set forth in the college or university catalog.

If an institution is willing to go to the trouble and expense of carrying installment accounts and suffering the loss that will inevitably result, I would have no quarrel with it. A better plan, it seems to me, is to require payment at the beginning of a semester or quarter and for the institution to provide financial assistance to the student, if possible, by either grants-in-aid, scholarships or student loan funds.

If the institution cannot meet the student's needs, the student, or his parents, can resort to some lending agency in his home community or to one of the several well known plans for financing college expenses on the same general plan that enables one to purchase an automobile or refrigerator with deferred payments, possibly on more liberal terms. It is much better to have the installment collections scattered all over the country than to have them centered on one desk at the institution.—F. L. JACKSON.

Percentage of Married G.I.'s

Question: What percentage of G.I. students on our campuses is likely to be married, thus requiring special accommodations?—A.L.G., Maine.

ANSWER: No exact data are available pertaining to the number of veterans who are married. Information procured by the American Council on Education would indicate that the per cent varies by institutions from 25 to 40, with probably a general average of 30 per cent.

Equally important in the planning of colleges is the fact that approximately one third of the married veterans

have children, which means about 10 per cent of the total. Both percentages will increase and the problem will grow more serious.

Normally, only about 5 per cent of students were married and less than 0.5 per cent had children. Almost all were graduate students, many of them holding teaching fellowships.

The American Council on Public Affairs, 2153 Florida Avenue, N.W., Washington, D.C., will publish shortly my little book, "Veterans Education and Training Opportunities"; it is hoped that this will answer a great many questions. May I suggest also that much current information may be found in the bulletin, "Higher Education and National Affairs," published by the American Council on Education.—FRANCIS J. BROWN.

Lighting College Classrooms

Question: Has fluorescent lighting proved effective in college classrooms?—H.P., Mo.

ANSWER: At M. I. T. we have eight classrooms equipped with fluorescent lighting. Our ceilings are approximately 16 feet high and the rooms are about 30 by 22 feet. We installed these fluorescent fixtures so that the cutoff is approximately 8 feet from the floor, using a reflector with a 17½ degree angle. These rooms are lighted to approximately 25 foot-candles and the greatest variation is between 30 and 20 foot-candles. Owing to the height of the ceiling and mounting height of the fixtures, we have not used louvers.

Both our staff and students are much pleased with the lighting at this level, and the only difficulty we have encountered has been in rooms that are still equipped with incandescent lighting with a level of about 12 foot-candles.

We have equipped also 14 chemical laboratories with fluorescent lighting having a lighting intensity of approximately 25 foot-candles at the desk top levels and have equipped 14 drafting rooms using an intensity of 50 foot-candles on the surface of the drafting tables.—CARL PETERSON.

Faculty Discounts on Purchases

Question: Should faculty members enjoy the same discounts extended by local businessmen to the purchasing department of the college?—I.M.F., Calif.

ANSWER: I suppose every university purchasing agent has, at one time or another, arranged to buy items for faculty members. This can be done in several ways, the commonest method being to buy the material for the university, charge it to the storeroom or business office miscellaneous account, transfer the equipment to the faculty member when it arrives and then collect the cost of the merchandise from the faculty member. Often, too, a friendly vendor may be induced to sell directly to a faculty member granting to him the same discount enjoyed by the university.

Generally speaking, the task of pleasing a faculty member on personal purchases is difficult. He usually will want to inspect the merchandise, often with his wife or other members of his family. He is also inclined to shop around and withhold his decision so that a great deal of time is wasted by the purchasing agent in completing the transaction.

Retailers object, usually, when they discover that they have lost sales because of their wholesaler's selling directly to the university for the benefit of its faculty members. In the field of electrical appliances and other items requiring service, the faculty member will have to forego the usual service offered by the retailer. Often, too, the requirements of the faculty fall outside of the normal trade channels in which the university does a great volume of business.

For the next few years there will be little inclination on the part of jobbers to sell at a discount for the benefit of faculty members. This condition will persist until merchandise is far more plentiful than it now is. Even in the future, the purchasing agent should be careful not to endanger his relationship with university suppliers merely to do a favor for a faculty member.—CHARLES W. HAYES.

NEWS

Congress Provides \$75,000,000 for Temporary Facilities . . . Fulbright Bill Passes . . . Super-Priority Ratings for Emergency Housing Go Into Effect . . . Selective Service to Defer Faculty Men If They Are Certified . . . Little Encouragement on Surplus Property . . . Recommendations of Work Conference . . . Surplus Textbooks Slow to Arrive

Congressional Action

One of the most important bills affecting higher education, S. 2085, which provides \$100,000,000 for temporary classrooms, laboratories, other nonhousing facilities and faculty housing, has been approved by Congress; it is described in the adjacent column.

Other bills affecting higher education were not as fortunate. S. 1770 providing grants-in-aid for permanent educational facilities, including dormitories, got snowed under in the legislators' rush to adjourn. A similar fate befell S. 1850, which was designed to authorize the establishment of a national science foundation and would provide scholarships and fellowships.

Other bills killed in committee included S. 2304, which would provide naval scholarships for N.R.O.T.C. students, and the Wagner-Ellender-Taft general housing bill. The latter would have assisted schools in providing housing for student veterans and their families.

The Fulbright bill, S. 1636, was passed and has been signed. This act permits the sale of surplus property abroad to establish credit in foreign countries to be used to provide an exchange of students between the United States and the countries concerned.

A board of foreign scholarships will select candidates and administer the program in conjunction with the State Department. Veterans will be given preference in obtaining scholarships for study abroad.

The State Department is said to be negotiating with a number of foreign countries to get the exchange program operating. It has been estimated that as many as 100,000 Americans and 50,000 students from other countries will take advantage of this opportunity in the next three decades.

Senators Murray, Morse and Pepper introduced a bill August 1 establish-

ing a national policy for education and providing a ten year program of assistance to states for further developments of educational systems. Higher education is included in this "cradle to grave" plan with appropriations for scholarships and fellowships running as high as \$35,000,000 annually.

The total annual appropriation asked is almost \$2,000,000,000. The bill is not sponsored by any special group.

Provisions of Mead Act

S. 2085, the Mead bill to provide temporary educational facilities other than housing, as passed by Congress carries an appropriation of \$75,000,000 rather than the \$100,000,000 asked by the President. The deficiency bill making the first named amount available has already received the President's signature.

Administration of the bill will be delegated to the Bureau of Community Facilities, F.W.A. The services of the Public Buildings Administration will also be used to every extent possible to make these facilities available promptly. Detailed administrative work will be decentralized to the division offices of F.W.A., it is expected. The measure is a further extension of the Lanham Act and all the structures are temporary war structures. The cost of demolition or dismantling, transportation and re-erection will be paid by the federal government.

It is understood that colleges will provide the site and utilities. Institutions are urged to survey their needs in specific terms and possibly to locate buildings in camps that have been declared excess to military needs. F.W.A. is preparing to move rapidly and will require all the cooperation possible from colleges and universities to expedite the completion of the various projects, administration officials pointed out.

Ratings for Emergency Housing

Special assistance to speed completion of 200,000 temporary veterans' housing units scheduled to be built this year was put into effect July 24 by the Civilian Production Administration.

This assistance comprises "certified HH" and "HHH" priority ratings, individual directives and "authorized orders." These temporary units are being erected at colleges and universities in need of living quarters for veterans entering this fall.

The special assistance action was taken by issuance of Direction 11 to PR 33 and Limitation Order L-357. Direction 11 was issued, in part, for use in specific instances when the HH rating (which PR 33 already permits) may not assure delivery of materials in time to complete scheduled remodeling or reuse of temporary housing for veterans under the Federal Public Housing Authority program. The special assistance in this direction is temporary and expires December 31.

Direction 11 provides several types of super-priority procedures for building materials on schedule A of PR 33 to be used after efforts by contractors to get these materials in time through use of HH ratings are unsuccessful.

Limitation Order L-357 covers restrictions on producers' and distributors' sales of certain heating and plumbing equipment made specifically for these temporary projects.

Teachers Will Be Deferred

Teachers will be deferred by Selective Service without regard to subject matter fields if certified by Form 42-A (revised) that they are essential to the instruction program and if such certification is approved by the U. S. Office of Education, according to informed sources in Washington on August 6.

Individuals engaged in scientific and technical research will be deferred if

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request is made to the Office of Education and if such certification of essentiality is approved by the Office of Scientific Research and Development.

Selective Service is issuing a revised Form 115-M which contains the official regulations governing these deferments.

Selective Service took specific measures regarding deferments of teachers following receipt of a letter which Dr. Francis J. Brown of the American Council on Education wrote to General Hershey on July 29, calling his attention to a resolution unanimously endorsed by the 200 representatives of higher education at the July conference called by the council.

Dr. Brown also presented factual data which indicated the seriousness of the situation that would result from the induction of faculty members of colleges and universities.

No Nominal Pricing Policy on Surplus Property

"No" is still the answer of War Assets Corporation in the matter of granting a nominal pricing policy to educational institutions in surplus property disposal.

Some hope of a reversal of decision had been pinned on the fact that a new administrator, Gen. Robert McGowan Littlejohn, has recently been placed at the head of the War Assets Administration.

Maj. Gen. Glen E. Edgerton, associate administrator, W.A.A., at the conference on emergency problems of higher education, declared that if all the surplus property stocks were earmarked for sale to educational institutions only, they would still be insufficient to meet the needs as computed by the U. S. Office of Education.

For example, as against the need of \$250,000,000 worth of engineering and other technological research equipment, he pointed out that W.A.A.'s recent inventory showed a total supply valued at \$19,000,000.

The action committee of which Dr. Francis Brown of the American Council on Education is a member has taken the case of education in surplus property disposal to President Truman himself.

A revision of Regulation 14 seems the quickest way to effectuate a change, according to a consensus

among educators at the conference. Legal counsel for W.A.A. interprets the Surplus Property Act as forbidding this.

A second possibility is an act of Congress directing donation of surplus property to education in recognition of prime essentiality of use for instruction, training and research. Third, the President may be induced to declare a national emergency to exist in equipment and supplies for education.

VHP-1 Amended

VHP-1, the Veterans Emergency Housing Program order, was amended in July. On the same day amended supplements 1, 2, 3 and 4 to the order were issued.

Supplement 1 deals with fixtures and equipment as covered or not by the order; supplement 2 with beginning construction; supplement 3 with small job allowances and classification of structures as to small job allowances; supplement 4 with items that are not structures.

Numerous minor changes were made, most of them for simplification, clarification and consolidation. Small job allowance for conversions of residential buildings to nonresidential purposes was cut from \$1000 to \$200.

Aid in Expanding Facilities

John D. Small, director of the Office of War Mobilization and Reconversion, has committed the Civilian Production Administration to giving all possible assistance to complete construction and expansion of nonhousing facilities for educational institutions involved in the G.I. educational program, the American Council on Education has announced.

In the specific processing instruction of the Manual of Operating Procedures No. 6, C.P.A. must determine the following facts: (1) exact construction or expansion work being done—kind of building, type of construction, exact intended use; (2) specific quantities of brick, lumber, etc., required; (3) VHP-1 approval, if required; (4) increase in enrollment for fall 1946 over fall 1940; (5) percentage of veterans in total fall enrollment; (6) average weekly utilization of classrooms and laboratories in hours; (7) adequate housing

for increased enrollment and expanded faculty; (8) usual requirement of substitute materials unavailable without rating.

Eligibility of the application to receive assistance is established by ascertaining that:

1. The institution's assured enrollment has increased at least 25 per cent over the base period of 1940 fall term.

2. The percentage of veterans in the anticipated 1946 total enrollment is 20 per cent or more.

3. The present classroom and laboratory facilities are to be utilized at least thirty hours per week and all other means of operating the other facilities of the institution are being utilized to the greatest extent possible.

4. Adequate housing accommodations are available or are assured of being provided for the increased enrollment and expanded faculty.

5. The type of facility is indispensable to the educational activities of the institution. Indispensable facilities in order of precedence are: classrooms and dormitories; laboratories and shops; dining rooms and cafeterias; administrative offices and student counseling facilities not recreational in nature.

Libraries, auditoriums and stadiums, while not considered indispensable, may in exceptional cases receive consideration provided a favorable recommendation is obtained in each case from the Office of Education.

C.P.A. has promised that all properly submitted applications will be reviewed within forty-eight hours of their receipt. Applications covering repairs and maintenance are also governed by this requirement.

Officials of C.P.A. have pointed out that colleges and universities are not prevented by VHP-1 from undertaking repairs costing more than \$1000. They are simply required to submit projects to C.P.A. for approval.

Veterans Apply Under Public Law 16

Veterans Administration announced in late July that a total of 3,300,000 veterans has applied for vocational on-the-job training and education.

Approximately 1,000,000 veterans have begun training under the G.I. bill. A recent survey shows more than

600,000 were attending school as of the end of June; more than 300,000 were engaged in on-the-job training, and more than 90,000 disabled veterans were receiving vocational training.

Surplus Textbooks Slow to Arrive

According to latest reports, few of the 300,000 surplus textbooks being handled by the Library of Congress have been shipped to colleges for distribution to veterans on their campuses. The books were surplus orders originally prepared for the army A.S.T.P. and navy V-12 students.

A second catalog of surplus books is expected to be distributed this month to all business managers. More complete than the first, it contains between 1500 and 2000 titles.

These books, formerly the property of the War Assets Administration, were transferred to the Veterans Administration with the Library of Congress handling the actual shipment of books. Orders for these books have not been as numerous as had been originally anticipated. College bookstores state that the 25 cents paid by the Veterans Administration to the college is not sufficient to cover handling costs. Limiting distribution of the volumes to veterans only has discouraged many universities from placing orders for the books.

Federal Spending on Veterans

Future indications of the prospective cost of the nation's G.I. educational program may be seen in the report of the Veterans Administration that during the eleven months ending May 31 expenditures totaled \$285,788,138.77.

Of this amount, \$9,038,965.34 was disbursed for both education and on-the-job training groups, \$7,001,286.58 for textbooks and supplies, \$44,915.681.10 for tuition, \$1,061,064.78 for counseling service, \$227,671,104.97 for subsistence.

During the eleven months' period it has been estimated that 900,000 men and women veterans were participating in the education and training programs.

Small Gifts Aid Housing

The sum of more than \$12,000 was raised recently by students,

faculty, alumni and friends of Bethune-Cookman College at Daytona Beach, Fla., for the benefit of a student housing program. The funds came from small donations made both on the campus and by church, school, civic and alumni groups in Florida communities.

Maryland to Have College of Military Service

The University of Maryland will open a college of military science, physical education and recreation in September, President H. C. Byrd announces.

College men will be given military training comparable to that at West Point and Annapolis and at the same time receive a general education. Veterans majoring in military science will be permitted to offer some of their service activity as transferable credit to the college.

Army-Navy Donations

The navy has come around to a more liberal interpretation of legislation authorizing donation in order to help meet critical equipment shortages in schools and colleges, according to the U. S. Office of Education on Aug. 7.

The army issued instructions in July authorizing donations of numerous items of excess property to educational institutions.

Naval procedures require that all donated items be used in classroom work. They will be available on the basis of need regardless of the institution's location.

Oregon Building Fund Voted

Voted at a recent special election by the people of Oregon is a ten year building program for several colleges and universities of the state system of higher education. The program, calling for an expenditure of \$7,540,000, is financed by vote at the election and by a sum allocated by the legislature to the extent of \$5,000,000.

In addition to the buildings and equipment planned during the state-financed plan, the state system has adopted a policy of self financing housing and recreational facilities.

At the University of Oregon a \$600,000 classroom and laboratory

building will be constructed first, followed by the self financed \$900,000 student union building and a \$900,000 general hospital and medical teaching center.

First to be constructed at Oregon State College is the \$100,000 industrial research building, equipment for which will be furnished by the Forestry Research Foundation.

Housing units, libraries, classroom and administrative buildings will supplement the facilities at Eastern Oregon College of Education at LaGrande, Oregon College of Education at Monmouth and Southern Oregon College at Ashland.

Recommendations of Work Conference

More than 150 representatives of higher education and government agencies were called by the American Council on Education July 11 to 13 in Washington to consider emergency and long range problems of higher education. Housing, surplus property, essential equipment and materials, manpower and army and navy training programs were among the problems argued. With Dr. George F. Zook presiding, the meeting featured talks by John R. Steelman, Maj. Gen. Graves B. Erskine, Gen. Omar N. Bradley, Wilson W. Wyatt, John D. Small, Arthur S. Adams and the commissioner of housing of the State of New York.

Among outstanding recommendations developed from the work conference were:

1. That appropriate action be taken for the purpose of making the several authorized charges, such as for tuition, books, equipment, supplies, and fees for veterans enrolled under Public Law 16 not less than those for other veterans enrolled under Public Law 346.
2. That Congress pass S. 2085 before it recesses this summer, thereby providing necessary classrooms, laboratories and other physical facilities.
3. That Congress pass in the session then current S. 1770 to provide federal aid in the construction of permanent educational facilities.
4. That the American Council on Education make a study during the fall term of the adverse effect of the shortage of nonveteran faculty housing on the entire educational program for veterans; but that steps be

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taken at once to procure immediate approval by the federal agencies of applications for construction of permanent housing for nonveteran faculty members in institutions in which the lack of such faculty housing will decrease the number of veterans who can be admitted.

5. That a committee be appointed to represent the conference in procuring the adoption immediately by W.A.A. of a nominal price policy, not to exceed 5 per cent of fair value, on all surplus property needed for adequate educational and research programs.

6. That the Selective Service establish a policy of granting occupational deferment for staff members of colleges and universities in fields where critical manpower shortages exist.

7. That the American Council on Education be requested to present data and statistics on critical need of colleges and universities for staff members.

8. That the American Council on Education secure continuation of LBM 115 M, providing for consideration for deferment and its extension to fields of teaching and research in which critical shortages exist.

9. That Congress pass S. 2304 and its House companion bill, authorizing the Holloway plan providing naval scholarships for N.R.O.T.C. students before the end of the session then current.

10. That the conference go on record as supporting the Fulbright bill, S. 1636, which provides funds for educational purposes in the currency of the countries purchasing surplus property of the United States.

11. That the conference go on record as supporting the Bloom bill, H.R. 4982, which provides funds for the cultural and educational program of the Department of State.

Gets Electron Microscope

An electron microscope, the first in Kentucky, will be purchased by the Keeneland Foundation and installed at the University of Kentucky for the free use of qualified citizens of the state and for the major use of the university.

The foundation, created for the purpose of encouraging scientific research in Kentucky, found that in certain instances research had lagged

within the state because of a scarcity of technical and expensive scientific equipment.

The foundation also will pay installation charges and the expenses of any faculty member choosing to take the necessary training in the use of the microscope.

Veterans Want Greater Aid

Veterans enrolled at the University of Nebraska and the University of South Carolina are making an organized effort to obtain more from the federal government in subsistence allowances.

They assert that the present \$65 per student (\$90, if married) is inadequate and ask \$90 for single men and \$115 for married veterans.

V.A. Can Reimburse States and Local Agencies

Passing Congress in the nick of time August 2 was S. 2477 which authorizes the Veterans Administration to reimburse state and local agencies for expenses incurred in rendering services in connection with the administration of certain training programs for veterans.

Changes in existing law recommended by V.A. and effected in the passage of the bill are briefly:

1. Authority to V.A. to reimburse state and local agencies for expenses incurred in rendering services in connection with the administration of certain training programs for veterans.

2. A ceiling on the total amount of compensation for productive labor and subsistence allowances that may be received by veterans taking on-the-job training.

3. A clarification of the law to permit a man to work part of his way through college and earn a reasonable amount without losing his right to subsistence allowances.

4. The procuring of standards "for other training on the job."

Housing for Nonveteran Teachers

Nonveteran faculty members at American colleges and universities will be permitted to occupy 5 per cent of the available temporary houses at any institution, Wilson W. Wyatt announced recently. The granting of

HH priorities, however, to such faculty members for building permanent homes has been denied.

The "homes for veterans" policy overrode considerable agitation on the part of university presidents for granting HH priorities to nonveteran staff members for building permanent dwellings. Many universities contend that they will have to curtail admissions of student veterans next fall if they cannot house additional faculty members.

Approved has been the granting of HH priorities to persons wishing to build rooming houses for student veterans, provided the application is endorsed by heads of the institution whose students will be housed therein. There must be proof also that there is a lack of rooms in the college community.

New York Considers University

Gov. Thomas E. Dewey of New York has appointed Owen D. Young to head a commission to inquire into the desirability of a state university for New York. An attempt to establish such a university was made at the recent legislative session. Mr. Young, prominent industrialist, was formerly chancellor of the board of regents for New York.

Suggest Farragut for Veterans

Serious consideration has been given to the proposal to transform the Naval Training Center at Farragut, Ida., into a college for veterans residing in Washington, Oregon, Idaho, Montana and Wyoming. Plans would call for use of this \$60,000,000 plant only in the event that colleges in the area were unable to take care of the overflow of student enrollments expected this fall.

Gifts to Mount Holyoke College

Gifts to Mount Holyoke College of more than \$245,000 during the year 1945-46 were announced by President Roswell Gray Ham at the 109th commencement exercises in June. The total included more than \$48,000 from the alumnae fund in addition to individual bequests and special purpose funds. The Florence Purington Visiting Professorship Fund, ultimately planned to reach \$150,000, now stands at \$40,000.

Names in the News

WILLIAM V. SHANNON of San Marino, Calif., has been made assistant treasurer of the Associated Colleges in Claremont, Calif. Now on terminal leave, Mr. Shannon was security analyst for the Security First National Bank of Los Angeles until he entered the army in 1943. Following service with anti-aircraft units of the coast artillery, he was transferred to the signal corps in 1944 and became a contracting officer in charge of terminating war contracts.



CHARLES CLIFTON DELONG, assistant comptroller of the University of Illinois, succeeded C. A. WEBBER as university bursar on July 1, Comptroller Lloyd Morey announces. Mr. Webber is resigning to become executive officer of the new Champaign County Bank and Trust Company, Champaign, Ill. Mr. DeLong served from 1927 to 1930 as an auditor in the Internal Revenue Department and later as a faculty member of the University of Illinois. He has been in the business office since 1934. HERBERT O. FARBER, assistant auditor, will become assistant to the comptroller, with major responsibility for budget preparation and operation and the handling of research contracts and other trust funds.

DR. ARLYN MARKS, formerly assistant director of the University of Illinois office of nonacademic personnel, has been appointed director of a new office of nonacademic personnel at the University of Iowa.

RUTH HARRIS, formerly personnel officer of the Chicago colleges of the University of Illinois, has been promoted to assistant director and JOHN BOYER has been named personnel officer for the Chicago colleges.

ASA S. KNOWLES, dean of the school of business administration, Rhode Island State College, has been appointed president of the Associated Colleges of Upper New York at Geneva. The institution, which will be operated as a state-sponsored veterans' university, will occupy the Sampson Naval Base and will be open

for classes in October. Besides former servicemen, "17 and 18 year old men students to a number not to exceed 20 per cent of the enrollment" will be accepted and "wives of veterans will be admitted if qualified."

M. C. CUNNINGHAM, dean of Northwest Missouri State Teachers College, Maryville, has been named to the presidency of North Dakota State Teachers College, Valley City. He succeeds EUGENE H. KLEINPELL who was appointed as president of Wisconsin State Teachers College at River Falls.

ROBERT C. HORN, dean of Muhlenberg College at Allentown, Pa., was named vice president of the college on June 20. SHERWOOD R. MERCER, consultant in higher education of the Connecticut State Department of Education, was appointed dean of the faculty.

CARL J. CHRISTENSEN of the technical staff of the Bell Telephone Laboratories has been appointed dean of the new School of Mineral Industries, University of Utah. The school is being created as a division of the School of Mines and Engineering "made necessary by the great number of students studying in these fields and by the increased emphasis being given to the study of mineral resources in the West." A. LEROY TAYLOR will continue as dean of the school of engineering.

ARTHUR L. DAVIS, senior professor of modern languages, Washington College at Chestertown, Md., has been appointed registrar to succeed WILLIAM R. HOWELL, professor of social studies.

NICHOL H. MEMORY is the new treasurer at Stevens Institute of Technology, Hoboken, N. J.

HAROLD J. KING has taken office as comptroller of the University of Pennsylvania.

J. P. HASSELER, former bursar at Grove City College, Grove City, Pa., has been named treasurer of the college.

RAYMOND W. KETTLER, auditor at Purdue University, has recently been appointed Mr. Bodden's successor in the post of chief accountant. Prior to his appointment to the Purdue business staff in 1942, Mr. Kettler spent several years as director of the budget of the institutions of higher learning in Oklahoma.

GEORGE D. CROFTS, comptroller and treasurer of the University of Buffalo, was honored recently by the university council in a special resolution for "his skill, his energy and his devotion" over a quarter century of service. Under his financial guidance, capital funds and total assets have multiplied six times in these twenty-five years; the university emerged from the depression and the war with no debt and has finished each fiscal year since 1933 without an operating deficit.



WILLIAM SPEER has been appointed director of admissions of Rutgers University, according to an announcement by Dr. Robert C. Clothier, president. Mr. Speer, a Princeton graduate, served as assistant to the headmaster of the Gilman School, Baltimore, until 1942 when he entered the navy. He joined the staff at Rutgers in January of this year as assistant admissions officer after spending two years overseas as an armed guard gunnery officer with the rank of lieutenant.

RAYMOND WESLEY WILD of the public relations staff at Michigan State College took over the direction of public relations at his old school, the University of Kentucky, July 1. He succeeds E. G. SULZER, director of public relations and radio since 1929, who has been named head of the newly established department of radio arts. HELEN KING, assistant director of public relations, becomes executive secretary of the alumni association.

LEONARD B. WHEAT has been appointed director of counseling service, Alabama Polytechnic Institute, Auburn.

ARTHUR E. WRIGHT, former executive secretary of the Illinois Institute of Technology Alumni Association, has been named coordinator of veterans' affairs at the institute to relieve JOHN F. WHITE, assistant dean of students, of his duties in connection with the veterans' program.

DR. WILLIAM LIVESEY BURDICK, 86, at one time vice chancellor of the University of Kansas, died recently of coronary thrombosis at the Lawrence Memorial Hospital, Law-

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rence, Kan. Confidant of governors, many of whom were his former students, Dr. Burdick was one of K. U.'s most revered teachers. He joined the staff in 1898 when the law school was only seven years old and continued his teaching in this school until he retired in 1943. He served as vice chancellor from 1916 until 1937.

LEROY E. LUBERG, principal of West Junior High school in Madison, Wis., who during the war was on leave for duty in the army, was recently appointed as a full time assist-

ant to President Edwin B. Fred of the University of Wisconsin. He will assume his duties September 1.

FREDERICK DODGE has resigned as superintendent of schools of Shelby County, Missouri, effective September 1, to become manager of the campus bookstore, State Teachers College, Kirksville, Mo.

HERBERT L. SPENCER, president of Bucknell University, announced on June 13 that a 15 per cent salary increase for all members of the teaching staff would become effective with the beginning of the fall term.

"Adoption of the new salary schedule has been made in recognition of the increased teaching load assumed by Bucknell's professors and will help to take care of increased living costs."

ERI JAY SHUMAKER, associate professor of English, Denison University, has been appointed president of Oneida Institute in Kentucky. Dr. Shumaker, who has been granted a two year leave of absence by the university, assumed his new duties the middle of July.

REED ALVORD, assistant to the president of Colgate University, has been appointed university secretary, a post that has been vacant since the retirement of **ALFRED E. ALTON** in 1931.

GEORGE HOLLAND SABINE, vice president of Cornell University and professor of philosophy, relinquished his administrative duties July 1 to return to full time teaching and research.

E. BOYD MORROW, former headmaster of Gilman Country School, Baltimore, died of a coronary occlusion July 12 at the age of 64 years. Mr. Morrow had served the school as instructor of mathematics (1906-13), assistant headmaster (1913-26) and headmaster (1926-43).

CAPT. FRED K. ELDER, recently appointed assistant to the president of the University of South Carolina, R. Adm. Norman M. Smith, has taken over his new duties. Capt. Elder, a graduate of the U. S. Naval Academy, served as a line officer in the navy until 1933 when he retired.

MAURICE E. McCAFFREY, secretary of the University of Wisconsin board of regents for 40 years, retired on July 1 but will remain as university trust officer. A. W. PETERSON was named regent secretary to succeed Mr. McCaffrey but will continue as director of business and finance. To assist him the regents created the new position of assistant to the secretary of the board and named **CLARKE SMITH** to the post. Mr. Smith also serves as assistant to the director of business and finance.

HOWARD CHENEY has been named a consultant to **ERNEST L. STOUFFER**, University of Illinois architect, in connection with plans for new university buildings. Mr. Cheney designed the Washington airport and many important federal buildings. He was consulting architect for the Illinois Union building.

DIRECTORY OF ASSOCIATIONS

Associations of College and University Business Officers

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Executive Committee: L. F. Seaton, University of Nebraska; Paul H. Elleman, Ohio State University; A. F. Gallistel, University of Wisconsin; Henry E. Pearson, Indiana University; John J. Colgate, University of Pennsylvania.

Association of College Unions

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American College Public Relations Association

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Publications: editor, Lorena D. Ummond, Southern Illinois Normal University; associate editor, Paul Faris, Hendrix College; business manager, Roy K. Wilson, National Education Association.

PRODUCT INFORMATION



Information on the materials, equipment and supplies with which an institution is built, operated and maintained and which are used in its various departments is of vital interest to those charged with the business operation. College and University Business recognizes the importance of this information and believes it has rendered a real service by grouping manufacturers' announcements and new product descriptions into a separate part of the magazine. We believe this is an infinitely better plan than to mix such information through the editorial pages where it becomes obscure and confusing.

You will find manufacturers' advertisements from pages 49 through 64. Pages 58-63 contain descriptions of new products and items of interest. Further details on any product advertised or described may be obtained without obligation and with a minimum of effort by use of the postcard below.

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This card is detachable and is provided for your convenience in obtaining information on all items advertised in this issue or described in the "What's New" Section. See reverse side.

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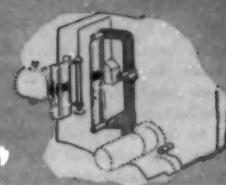
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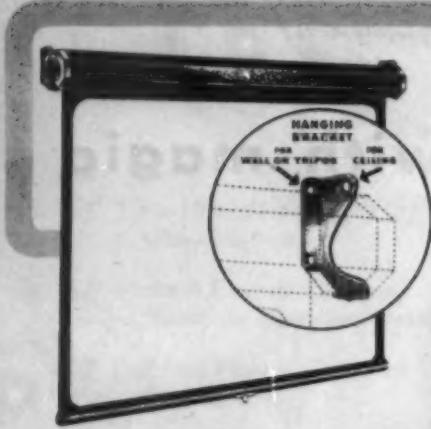
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COLLEGE and UNIVERSITY BUSINESS

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КТОРЫЙ ЧАС?

THE FAIRCHILD

Language Master

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ЧАС? КТОРЫЙ

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Any word, any phrase repeated endlessly — until mastered!

LET'S SAY a student is studying Russian. A single phrase, "который час?", is giving him trouble. He can't quite master the elusive slavic intonation. He needs to hear, "который час? который час? который час?", repeated again and again — patiently.

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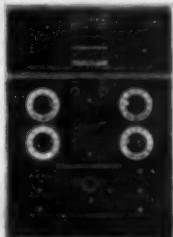
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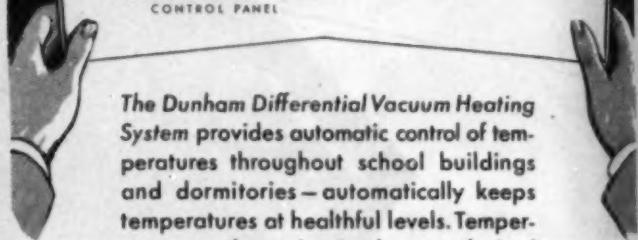
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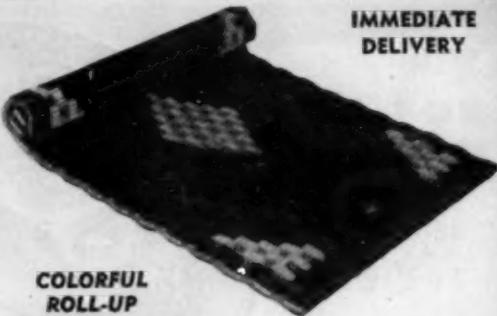
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in institutional service than any other make

desks

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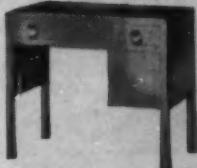
for burning "Midnight Oil"!

We've made a study of desks. Big ones, little ones . . . all kinds. And one thing is sure! A desk in a dorm is a mighty important piece of furniture. That's one reason why we suggest you see the Simmons line of bright, colorful all-metal desks before you select your new equipment.

You see, Simmons is famous not only for quality in materials and workmanship, but we know how to design the handsome, durable furniture students really want . . . at prices you want to pay. It's pretty hard to beat this combination! Why not get the full story now from your Simmons dealer . . . or write direct to any Simmons office.



Desk F-142-6: Height 31½ in.; Top 34½ x 19 in. Modern table type with square tubular legs and large drawer pulls.



Desk F-142-10: Student's single Model. Height 31½ in.; Top 34½ x 21 in. Large pulls, open book shelf at right end.



Double Desk F-142-12: For two students. Has two open book shelves at end, two drawers on each side. Height 31½ in.; Top 42 x 32 in.



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Kneehole Desk F-142-9 (Shown in room scene above). Has open book shelves at each end, 3 drawers with large pulls. Height: 31½ in.; Top 44½ x 21 in.

WHAT'S NEW.

The easiest way to get more information about the new products described in this section is to use the postage paid card opposite page 49. Just circle the key number on the card which corresponds with the number in the headline of each item. COLLEGE and UNIVERSITY BUSINESS will send your request to the manufacturer.

Grease Interceptor

Installed Without Recessing in Floor



Install without recessing in the floor. Because of its unique design, it can be installed without recessing with dishwashers having low reservoirs and drain connections or under low built counter or drainboard installations.

The flotation principle is used to intercept grease. Perforated baffle plates eliminate turbulence in the water as it enters the interceptor, permitting the grease to separate from the water. The intercepting chamber is an integral unit which can be easily removed for cleaning, thus simplifying removal of grease. The units are made in cast iron or stainless steel, depending upon requirements, and can be furnished with anchorage flange or seepage pan when so specified.—*J. A. Zurn Manufacturing Company, Erie, Pa.*

Plastics in Lighting

Uses Described in Booklet

"Plastics for Light Conditioning," a 12 page booklet describing the uses of plastics for reflectors and shades, has been prepared by the Plastics Divisions of the General Electric Company. The booklet is illustrated, lists models now available and the characteristics of each type.—*Plastics Divisions, Chemical Department, General Electric Company, Pittsfield, Mass.*

CUB 65

wrinkle lacquer finish, rubber feet and a convenient carrying handle. The amplifier unit will serve efficiently for public address work when used in conjunction with a high-impedance microphone or phonograph turntable and an auxiliary speaker.

Because no wear or deformation of the wire occurs during recording or reproducing, the wire itself will last indefinitely. Previously recorded sound is "erased" automatically when a new recording is made, and thus portions of a recording can be removed and replaced as desired. The new machine, including a microphone of the desk-stand type, is priced at \$595 plus \$40.16 federal excise tax.—*Bell and Howell Company, 7100 McCormick Road, Chicago 45, Ill.*

Coffee Brewing Robot

CUB 68

Prepares Beverage Automatically

Cory Automatic, a new and entirely mechanical coffee brewing device which removes the human element from the brewing of coffee, is described as a mechanical robot whose mysterious operation actually creates an endless fountain of coffee. Through utilization of the pressure of the regular water main and the principles of electronics, it guides and controls the water supply in such a way as to convert it magically into freshly brewed coffee. The operator simply fills a small cartridge with ground coffee, places the cartridge in position and presses a button. The brewer automatically draws the correct amount of water, brings it to brewing temperature and pushes it upward through the coffee grounds, making freshly brewed coffee. Then it fills serving decanters automatically, turns itself off and proceeds to keep the coffee hot and ready to serve. Completely automatic control is established for brewing time, temperature and the amount of water used.—*Cory Glass Coffee Brewer Company, 221 North La Salle Street, Chicago 1, Ill.*

Wire Recorder

CUB 67

Now Available From Audio-Visual Firm

The Peirce Model 55A Magnetic Wire Recorder and Reproducer is now being distributed by Bell and Howell Company. The instrument provides 66 minutes of continuous recording, embodies a 5 inch permanent magnet speaker and will operate on any 115 volt A.C. line or on D.C. with a converter.

Other features include simplified and readily accessible controls, welded steel case construction, silver gray

Portable Bowling Alley

CUB 69

Augments Recreational Activities

For institutions wishing to add bowling to the sports activities they now provide but lacking the funds or maintenance personnel, the new Two-Way Bowling Alley is the answer. A portable alley, there is a pit at either end to catch the pins after they are struck by the ball. The pits, protected by floor mats and heavy swinging canvas cushions, swing open on durable casters to assure speedy operation of both playing ends. The player

"up" has pins set by opponent, the player's pit being open, the opponent's pit being closed. Upon completion of a player's "try," the player becomes pin-boy for the opponent, sets up the opponent's pins and closes pit for the opponent's "try."

The alley floor is made of high grade, edged, grained hardwood, sturdily constructed to ensure long life. Inlaid spots at both ends of the alley floor direct accurate setting up of pins. The game may be played by units of two or more people, and score is kept exactly as in regulation bowling.

Dimensions are length, 23 feet overall; width, 32 inches overall; height of alley above floor, 18 inches; height of both ends from floor, 38 inches. Approximate shipping weight is 800 pounds. The price of the unit, complete with equipment ready for bowling, is \$459 F.O.B. factory.—*Two-Way Bowling Corporation, 114 East Thirty-Second Street, New York 16, N.Y.*

New DDT Powder

CUB 70

Has "Tear Gas" Effect on Bugs

A new type of DDT powder, containing 10 per cent DDT and a chemical "bug-flusher" known as pipernylcyclohexanone which makes it doubly effective, has been developed by Sherwin-Williams chemists. The chemical is said to affect bugs as tear gas does humans and flushes the bugs out of their cracks into the deadly powder. The new Pestroy powder container has a rubber top which operates by thumb pressure to squirt a stream of powder into cracks and hard-to-reach places. It is now on sale in department stores, drugstores, hardware and paint stores across the country.—*Sherwin-Williams Company, Midland Building, Cleveland, Ohio.*

New Clock Systems

CUB 71

Synchronized With Alternating Current

Edwards new complete clock systems, featuring the widely known dual motored Telechron self-starting synchronous movements, are described in the company's Bulletin No. 250. Unlike electric clock systems which operate by a minute impulse from a master clock, Edwards Systems are exactly in synchronism with the alternating current. There is no central control clock to be looked after, regulated and serviced; the movements operate without contacts, rectifier, master clock, relays, pendulum, keys or switches.

All clocks, program instruments and signals listed in the catalog are approved by the Underwriters Laboratories for 115 volt A.C., and the material and workmanship carry the company's unqualified guarantee. Units are designed for operation on 115 volt, 60 cycle alternating current but, when specially wound, they can be used on other voltages and frequencies.

The systems described in Bulletin No. 250, it is pointed out, are clock and program systems. For information about intercommunicating telephone systems, the company has prepared Bulletin No. 205; for fire alarm systems, Bulletin No. 135.—*Edwards and Company, Norwalk, Conn.*

Protective Program

CUB 72

For Pool and Locker Room Described

An adequate, protective program for the swimming pool requires not only chlorination of the pool water but proper disinfection of all pool surroundings to prevent opportunities for the spread of infection. The use of Pittchlor, which is 70 per cent calcium hypochlorite, is described in detail in an attractive red, white and blue folder entitled, "It's Easy to Use Pittchlor for Locker Room, Beach and Pool Sanitation." The folder can be obtained from the manufacturer by requesting "Form A-703."—*Pittsburgh Plate Glass Company, Columbia Chemical Division, Fifth Avenue at Bellefield, Pittsburgh 13, Pa.*

Flexible Wall Base

CUB 73

Fits Snugly to Old or New Floors

An up-to-date solution to the problem of keeping mop boards clean is provided by Wright-On-Top Compression



Base, a new flexible wall base which fits snugly to the floor. It conforms to the roughest surfaces, keeps out dirt and water and can be installed easily and quickly with old or new floors. Long life and low maintenance are features of this new wall base which can be cleaned the same way the floors are cleaned. It is said to have a satisfactory luster of its own but it may be waxed to a high polish. Resistant to stains, scratches, dents and scuffing, this modern base is durable and keeps its new-looking appearance indefinitely. It is used extensively for stair risers and kickboards.—*Taylor Manufacturing Company, 3056 West Meinecke Avenue, Milwaukee 9, Wis.*

New Typewriter

CUB 74

Embodies Many Functional Changes

Featuring "Rhythm Touch" and exemplifying a trend toward increased usefulness rather than facelifting changes, the first new postwar typewriter in the business machine industry has been introduced by the Underwood Corporation. The new typewriter embodies more functional changes than any typewriter introduced by Underwood

since it pioneered visible writing 50 years ago, according to W. F. Arnold, vice president and general sales manager.

Among the outstanding improvements in the new Underwood are an accelerated typebar action, providing a pleasing rhythm touch; a new rhythm shift for high speed; positive changing between small and capital letters, and a new ribbon action for absolute accuracy, particularly when using a two color ribbon. For greater finger ease and security, the width of the keyboard has been increased.—*Underwood Corporation, 1 Park Avenue, New York 16, N. Y.*

Bug Bomb

CUB 75

Releases DDT and Pyrethrum Automatically

The Bug Bomb aerosol dispenser, designed to release by automatic finger-touch control DDT and Pyrethrum in highly atomized form to kill mosquitoes, flies, moths,



bedbugs, ants and other insects, has been announced by Westinghouse Electric Corporation. It is now available through grocery, drug, department, hardware, appliance, specialty stores, janitor supply and other service companies.

The bomb contains 15 ounces, minimum, of the following ingredients: DDT, 1 per cent; pyrethrum extract, 20 per cent; hydrocarbon distillate, 12 per cent, Freon-12, 84 per cent, and is noninflammable and noncombustible. The bomb is green with an orange-red label and fits into the palm of the hand. It contains enough solution to spray 150,000 cubic feet of space or 150 normal sized rooms.—*Westinghouse Electric Corporation, Electric Appliance Division, East Springfield, Mass.*

Portfolio on Treads

CUB 76

Window Sills Aid to Construction

Wooster All Steel Safe Groove Treads, a complete structural unit for stairs with safety features integral with the step, and Wooster Cast Window Sills are described in a new 16 page, three color catalog on safety treads, nosings, thresholds, window sills, curb bars and elevator sills. Published by Wooster Products, Inc., the booklet presents suggested applications, complete descriptive material and details illustrating methods used

to install its products on any type of base. A portfolio of detail sheets, which facilitates the work of architects, construction engineers, specification writers and draftsmen in designing installations, is described also.—*Wooster Products, Inc., Wooster, Ohio.*

Specification Book

CUB 77

Gives Information on Waterproofing

A new specification book of Truscon Waterproofings, Dampproofings and Concrete Specialties has just been published and can be obtained by writing Truscon Laboratories of Detroit or any one of several divisional offices located at Boston, New York, Atlanta, Toledo, Chicago, Milwaukee, Minneapolis, Houston, Los Angeles or Toronto.

The book, complete with specifications, illustrations and descriptions of products, is divided into the three following sections: "Waterproofings," including integral waterproofing and iron waterproofing; "Dampproofings," including clear dampproofing and bituminous dampproofings; "Miscellaneous," consisting of transparent membrane method for curing concrete, swimming pool coatings, paint for damp walls, shrinkproof mortar, admixture for bedding machinery and other treatments.—*Truscon Laboratories, Inc., Caniff and Grand Trunk R.R., Detroit 11, Mich.*

Beverage Dispensing Equipment

CUB 78

Plans Contained in Unique Work Kit

A hot summer day and a cool summer drink offer a logical setting for perusal of the Amcoin Corporation's unique work kit for the planning, installation and operation of hot and cold beverage dispensing equipment. The kit, designed for easy use and quick reference, is in file folder form and contains new literature, specifications and dimensional drawings arranged in a compact unit.

Complete data on each of Amcoin's all glass interior coffee makers, juice fountains, iced tea and milk dispensers are grouped methodically and separated by four dividers with tabs. There is ample room in each section for placing additional material and correspondence relating to the equipment. The kit is available free to personnel in charge of food preparation and service.—*Amcoin Corporation, Buffalo 9, N. Y.*

Mass Feeding Installations

CUB 79

Studied in New Edition of Case Histories

Expected to be of value to operators of institutional kitchens, architects, designers, dietitians and training schools is the new de luxe edition of "Case Histories of Successful Mass Feeding Installations," published by the G. S. Blodgett Company. Now ready for distribution, copies can be obtained upon request to the publisher.

Twenty-eight case histories depicting good kitchen design are presented in the 36 pages of the liberally illustrated booklet. Kitchen plans and installation photo-

graphs, together with annotations on menus and services, help to visualize the well known installations which are used throughout the manual.

I. S. Anoff, president of the Albert Pick Company, Chicago, and chairman of the Food Service Equipment Industry, Inc., wrote the foreword, and an article on "Essentials of Kitchen Planning" by Harry Blumberg, vice president of Nathan Straus-Duparquet, Inc., is included.—*G. S. Blodgett Company, Inc., 50 Lakeside Avenue, Burlington, Vt.*

New Line of Boilers

CUB 80

Features Standardization of Dimensions

Engineers and architects planning new construction or plant expansion projects will be interested in the Springfield Company's development of a line of 12 standard water tube boilers ranging in guaranteed steam generating capacity from 6000 to 17,000 pounds of steam per hour. Springfield engineers expect to reduce engineering costs per unit to a nominal figure on the new standard line which will permit adoption of a price list system of quoting on the many small and medium sized jobs needed in the power, process and heating fields.

The new line is designated as the Springfield Type M series, and the new boilers feature a water-cooled furnace design. Dimensions for various sized units are standardized. Type M boilers are made with two standard tube lengths, 10 feet and 12 feet, expanded into sinuous electric steel sectional headers. All boilers in the line have 48 inch diameter welded, x-rayed and stress-relieved steam drums constructed to various pressure standards ranging from 160 to 320 pounds. The furnace width varies from 3 feet 9 inches to 9 feet. The overall setting height is 17 feet 5 1/4 inches for all units.

Features of the design are expected to be simplicity of maintenance, minimum number of parts and ability to operate considerably above rated capacity. Heat applied to steam delivery tubes and steam delivery above water level ensure dry steam and freedom from priming. Shop assembly of a considerable portion of the parts facilitates erection at the user's location.—*Springfield Boiler Company, 1999 East Capitol Avenue, Springfield, Ill.*

Decaffeinated Coffee

CUB 81

Now Available in Powdered Form

Everybody enjoys a good cup of coffee, and directors of food service will now be able to serve a soluble decaffeinated Instant Sanka to their students and customers.

Packaged in individual containers, the new Instant Sanka will be boxed in institutional size. Like regular Sanka, this new soluble decaffeinated coffee is 100 per cent real coffee, but with 97 per cent of the caffeine removed. It has the added advantage of speed, convenience and ease of preparation. There's no problem of underperking or overperking, no chance of an off-taste and no cleaning-up chore afterward.—*General Foods Corporation, 250 Park Avenue, New York 17, N. Y.*

Tripod Screen

CUB 82

Locks Automatically; Simplifies Projection



Challenger Tripod Screen is said to offer better projection, simpler operation and adjustment of height as well as sturdier construction. Its new and exclusive inner-locking system, "Slide-A-Matic," completely eliminates external locking devices, such as thumb screws or plungers. To adjust the height of the screen, the operator merely pulls back on the square elevating tubing, raises or lowers it to the desired height, releases the tubing, and it automatically locks in place; the fully opened screen can be adjusted in height without separate movements of fabric or case. A new hanger bracket and hanger loop hold the screen fabric securely and prevent it from accidentally slipping off.

Opening of the tripod legs is accomplished with one simple motion which automatically locks them in place. No rubber tips are needed for the feet of the new Challenger, yet it will not scratch floors. The leg itself is formed into a rounded foot which provides a firm grip on any surface.

An octagon-shaped case allows the fabric to roll in or out without rubbing against the edges of the case opening.—*Da-Lite Screen Company, Inc., 2723 North Crawford Avenue, Chicago, Ill.*

Drawing Machine

CUB 83

Produces Designs in Third Dimension

The Pomeroy Stereograph makes it possible for anyone familiar with the art of reading prints to illustrate any object or design in the third dimension with ease, speed and accuracy.

Expensive models and mock-ups of a new design are eliminated. Knowledge or need of other perspective methods or aids, central-lineals, grids, and the like, is not necessary owing to the design and method of operating this stereograph drawing machine.

The machine is made from duro-aluminum and steel and is precision machined for accuracy.—*Pomeroy Stereograph Company, Inc., Empire Building, 1783 East Eleventh Street, Cleveland 14, Ohio.*

Phase Microscope

CUB 84

Extends Range of Present Instrument

New equipment that transforms an ordinary light microscope into an instrument that extends the range of human vision far beyond present limits is now avail-

able. The new product, when added to a standard microscope, permits the observation and study of many living cells, tissues, microorganisms and industrial materials so transparent that heretofore little or no detail could be seen in them.

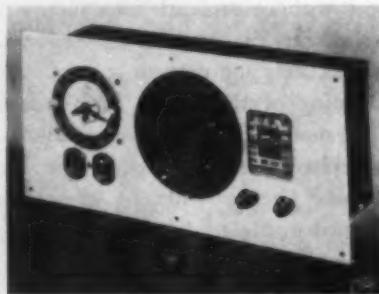
This fundamental advance in the use of the microscope is known as microscopy and the converted instrument is designated as a phase microscope. It consists of newly developed light controlling diffraction plates. Placed in an objective lens system, the plate makes detail visible within a specimen by increasing, reducing or reversing contrast in the image formed by the microscope. This eliminates the necessity of staining the organisms with dyes, a procedure that killed most organisms, thus preventing the study of living material.—*American Optical Company, Southbridge, Mass.*

Built-In Radio Set

Wall Type Suitable for Dormitories

A six tube super-heterodyne radio is now available for installation in de luxe college dormitories. It is designed to mount between the studs in college buildings, with ample clearance from the front to the back partition. Louvers are provided for dissipation of interior heat.

This radio is ultramodern in design and is available in harmonizing colors to match interior walls. It has a duplex receptacle conveniently located for plugging in electrical appliances such as a toaster or coffee percolator. A Telechron alarm clock with automatic switch can be set to turn the radio on and off.—*American Communications Corporation, 306 Broadway, New York, N. Y.*



CUB 85

Automatic Dishwashing Machine

Speeds Handling of Soiled Dishes

Food service managers will find the new Speeder automatic dishwashing machine a quick solution to their daily dishwashing problems.

The Speeder, 58 inches long, will handle as many as 190 racks of dishes, silverware and glasses an hour. It is a double tank machine with air spaces between the tanks to control heat transfer. The machine completely washes, rinses and sterilizes all contents and is adjustable for slower speed if desired. A special "stop and go" motion provides intermittent separate wash and rinse actions on each basket of dishes. The Speeder has direct reading water level gauges for each tank.

In the event that steam is not available, gas injectors can be supplied.—*Insinger Machine Company, State Road and Robbins Avenue, Philadelphia 35, Pa.*

Printing and Developing Machine

Turns Out Black and White Prints

CUB 87

Designed to provide simple, economical and efficient printing and developing facilities for those who require black and white prints in medium quantities, a new BW printing and developing machine, Model 41, has just been announced.

The Model 41 Printer has a printing speed range up to 6 feet per minute, depending on the transparency of the original, printing either roll stock or cut sheets, with a printing width of 46 inches. The light source is a 2000 watt glass mercury vapor lamp within a 6 inch diameter cylinder. An entirely new method of cooling pulls air into and through the cylinder and contact bands, resulting in minimum machine temperature.

Printing speed is controlled by a single knob, easily read dial, located within convenient reach of the operator. Suction through the bands simplifies feeding of tracings and sensitized paper, and the tangential method of feeding assures safety to the tracings and eliminates pinching or catching. Tracings and prints are removed without scraping, thus ensuring long cylinder life. A front pedal located at floor level and at the center of the machine instantly releases the band tension so that misfeeding or roll stock can readily be corrected.

Speed, contact and development controls are removable for cleaning and all parts in contact with the developer are of stainless steel or are nonmetallic. Being portable, the machine can be readily moved.—*Charles Bruning Company, Inc., 4754 Montrose Avenue, Chicago 41, Ill.*

For Movie Makers

Scale Gives Pertinent Data

CUB 88

A handy "cinescale" produced exclusively for use of movie makers is now available for the first time since the war halted production of this item.

The Neuscale is 12 inches long and 1½ inches wide, with data on both sides, giving every measurement needed in quick, accurate editing, in one compact instrument. The scale shows the frame count for 8 mm. and 16 mm. movies with the sound track location for the corresponding frame on 16 mm. sound and gives a projection timing table for both silent and sound movies and the measurement in inches and centimeters. This product is being offered for an introductory price of \$1.—*Neumade Products Corporation, 426 West 42d Street, New York, N. Y.*

Weather Processed Fire Hose

Is Water and Mildew Resistant

CUB 89

It is now possible to get new "All Weather" fire hose which is water and mildew resistant. The fire hose is

double-jacket tailored, built to withstand the abrasive action of gravel, cinders or rough surfaces over which it may be dragged. It will withstand extreme temperatures, from freezing cold to blistering heat.

This fire hose is flexible for easy handling at time of fire and for racking snugly and completely into a hose body before and after service. It is flat cured.

Treated with a double application of the "All Weather" process to make sure the fabric is impregnated so as to become water repellent, it is also submitted to a mildew inhibiting treatment to make the hose more durable and effective.

The edges of the hose are strongly reinforced with special high tension cable cord yarns at the points where reinforcement is most needed.—*American-LaFrance-Foamite Corporation, Elmira, N. Y.*

Automatic Slide Projector Has Patented Slide Changer



ing mechanism operates by gravity without injury to slides.

Slides are kept in metal containers ready for instant showing. After their projection, slides are automatically filed in lower metal container, in proper sequence and position to be shown again. The slides pass through the warming chamber before projection and this prevents buckling or an out-of-focus condition of the projected image. Focusing is done by a friction drive micro-focusing device.

Standard equipment provides for a 5 inch Wollensak anastigmat lens, a 300 watt lamp and 2 slide containers. A coated lens is also available at a slight additional cost. For projection before large audiences, a 7 inch lens can be obtained.

An efficient three condenser precision type of optical system gives a maximum light output and a cool aperture temperature and provides full coverage for bantam slides. The projector is attractively shell finished in two-tone gray baked enamel on a cast aluminum base.—*Picture Recording Company, 1240 Lawrence Avenue, Chicago 40, Ill.*

Permanent Coffee Filter Eliminates Use of Urn Bags, Filter Papers

Features of the new "Tri-Saver Coffee System" are described in detail in a generously illustrated brochure which is now available from the manufacturer. One of the out-

standing features is the "Tri-Saver" permanent coffee filter, a stainless steel filter which does away entirely with the use of urn bags and filter papers. The patented edge



filtration yields a full-strength and better flavored brew without sediment. Because the filter extracts maximum strength without absorbing any flavoring matter, a given amount of coffee is said to go farther.

One section of the booklet is devoted to the "Sealweld Burnout-Proof" construction which is embodied in the "Tri-Saver System" and which prevents damage and inconvenient shutdowns by eliminating leaks and burnouts.—*S. Blickman, Inc., Weehawken, N. J.*

Electric Musical Instrument For Chapels and Auditoriums

CUB 92

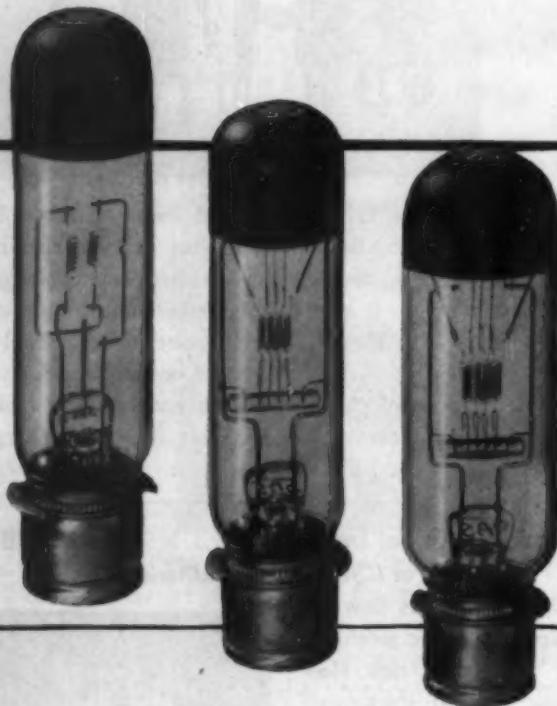


Electronics has now invaded the music world in the form of a new electronic musical instrument for chapel or auditorium. Manufactured by a nationally known maker of band instruments it has been christened Connsonata, the Electric Organ.

The Connsonata matches the more typical voices of the great pipe organ with musical resources equal to 1333 organ pipes, all with finger tip facility. The electronic organ duplicates with fidelity and clarity of tone many orchestral instruments of the symphony. All of this is done by purely electronic means, without the aid of reeds, pipes, blowers, wheels or any other moving mechanical parts. It also features a tremulant like the vibrato of the human voice, controllable in both speed and amplitude—something never before obtained on organs.

Beautiful console styling of the Connsonata, in several distinctive designs, is available at present, requiring a floor space of only 5 feet square. A two manual instrument specifically designed for churches and chapels is now in production. It has a cabinet of hand-carved oak, with matching bench and standard A.G.O. pedal board.—*C. G. Conn, Ltd., Elkhart, Ind.*

Don't let a burnout spoil your movies!



Be sure it's G-E...to be sure of:

1. Greater screen brightness, clearer pictures . . . G-E lamps are designed to give you full advantage from the optical system of your equipment.
2. More uniform screen brightness . . . differentially coiled filaments on most popular sizes fill the film aperture smoothly.
3. Uniformly dependable performance on every replacement...thanks to precision manufacture, rigid inspection.
4. Constant improvement, as developed by G-E lamp research, for better, clearer projection. See your G-E dealer today.

Remember...for every photographic purpose

G-E LAMPS

GENERAL  ELECTRIC

For better "still" pictures
keep asking for

G-E midgets!



COLLEGE and UNIVERSITY BUSINESS

NEW YORK
"The heating system is designed to be so flexible that special purpose rooms for community use after school hours, and for adult education, can be heated without having steam in the entire building."

PENNSYLVANIA
"Most of the present methods for raising room temperatures are still satisfactory if they are designed for economy if they are provided with modern control instruments."

MARYLAND
"The term 'heating' should be forgotten and the consideration given the more modern approach through 'climate conditioning'."

CALIFORNIA
"Schools should have conditioned air to provide heating, cooling, filtration, humidification and ventilation for human comfort."

MICHIGAN
"Certainly humidity, zone controls, and air movement with some method of disinfecting the air circulated will receive the attention due them. The control of these is required if proper comfort and health are to be maintained for the growing bodies subjected to the results of the installation."

ILLINOIS
"New designs should include air conditioning systems having compressors for cooling, humidifying and dehumidifying with automatic control."

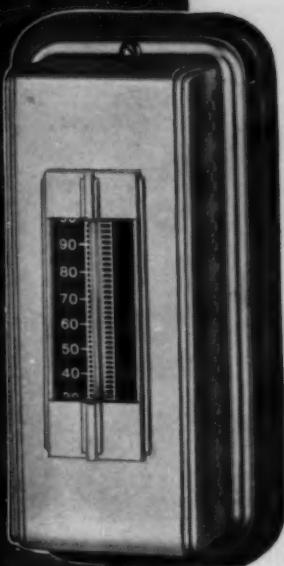
PENNSYLVANIA
"Aside from a comfortable room temperature, the most important school need has been to promote a healthful condition in the class room."

NEW YORK
"Schools should have a simplified system of temperature control to reduce fuel consumption."

INDIANA
"Humidifying equipment, probably air washers, should be installed after the heater and should be controlled automatically."

EVERYWHERE **ENGINEERS STRESS**

**THE NEED FOR
Automatic
TEMPERATURE
CONTROL
FOR
TOMORROW'S
CLASSROOMS**



JOHNSON
PIONEERS IN CONTROL

INDIANA

"All heating units, coal, gas or oil, should be equipped with a not too complicated combustion control."

FUTURE PLANNING IS BASED ON PROVED EFFICIENCY OF TODAY

Engineers across the country advocate the use of the finer equipment offered by the builders of automatic control systems for the temperature and air conditioning problems of the schools and colleges where additional classroom facilities soon will be constructed.

The countless college and university buildings, now enjoying the comfort and economical heating budgets which are made possible by Johnson Automatic Control Systems have set a standard upon which future planning is based. The quotations above, from an article in *Heating and Ventilating* magazine for

June 1945, indicate that engineers are keenly interested in automatic control and its many possibilities.

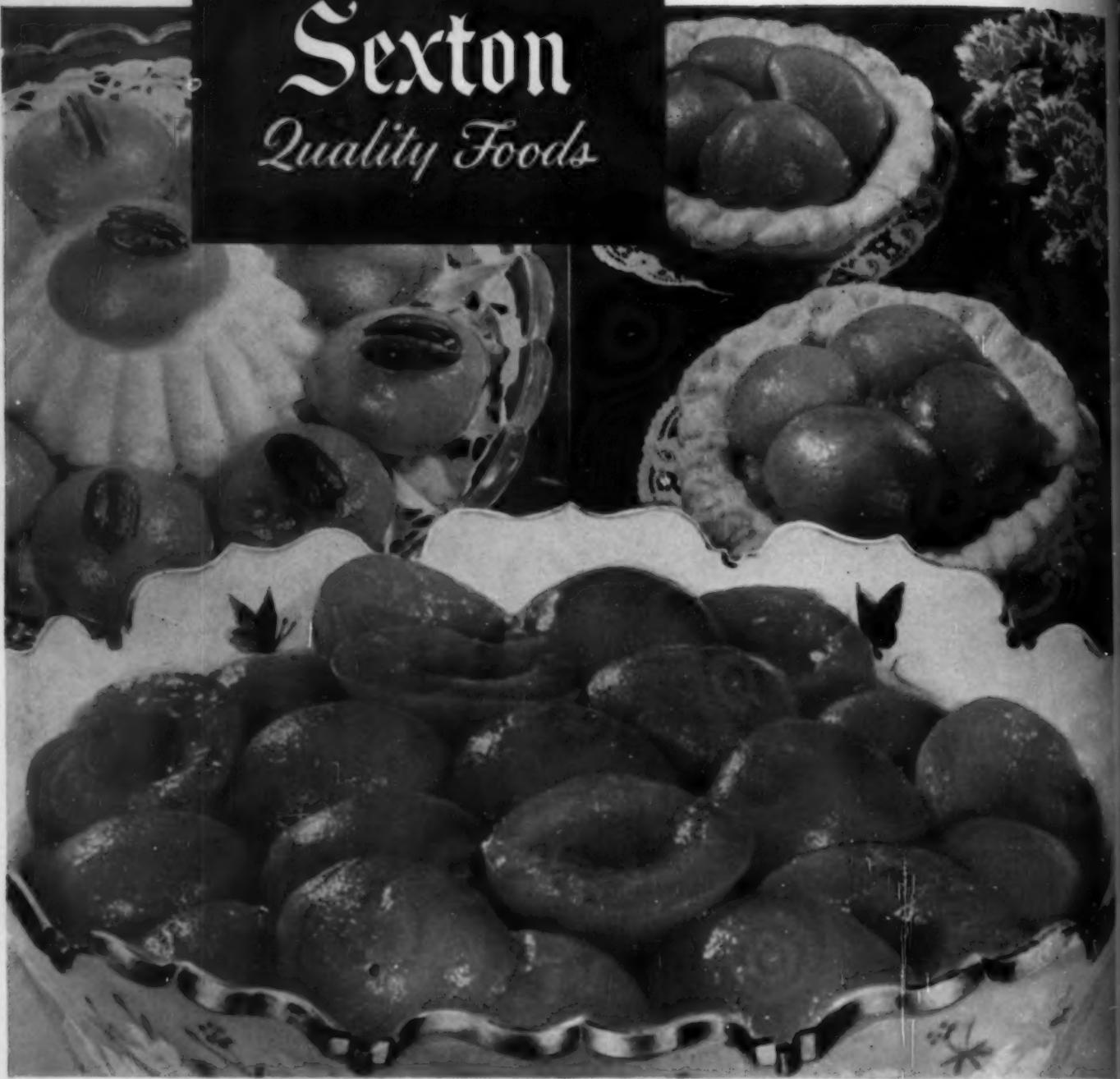
Whatever the problem may be in temperature and air conditioning control, Johnson engineers have had many years experience in cooperating to solve the most complicated. Johnson engineers design, manufacture, install and service their own automatic control systems . . . the sure way to build the whole system with the same correct precision as every part.

JOHNSON SERVICE COMPANY, Milwaukee 2, Wisconsin. Direct Branch Offices in Principal Cities.

JOHNSON Automatic Temperature and Air Conditioning **CONTROL**

DESIGN • MANUFACTURE • INSTALLATION • SINCE 1885

Sexton Quality Foods



Chosen FOR YOUR TABLE



GOOD FOOD FOR
PLEASED GUESTS

Of all the fruits that are canned, only the best are chosen for the Sexton label and your table. These luscious, sun-ripened Apricots are of the Blenheim variety grown in the famous Santa Clara Valley of California where Mother Nature is most lavish. They are the pick of the crop. Each can is chock full, giving you at least one extra serving. For quality and economy depend upon Sexton, specializing in foods styled to your particular service.

JOHN SEXTON & CO. 1940